

COMMERCIAL CAR JOURNAL

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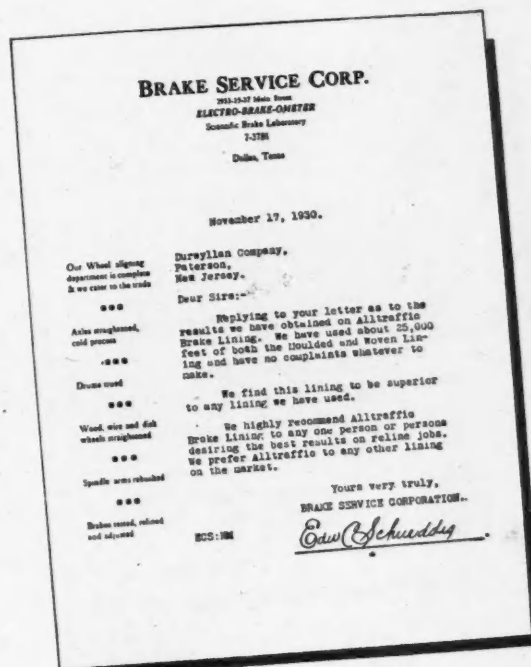
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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

The Commercial Car Journal

Recommended by brake experts



"For best results use ALLTRAFFIC"

AND who should know better? We can refer you to any number of large fleet owners who would simply echo this statement . . . but the expert brake service station takes in them all . . . fleet owners and car owners alike. For best results on reline jobs in 1931, specify ALLTRAFFIC.

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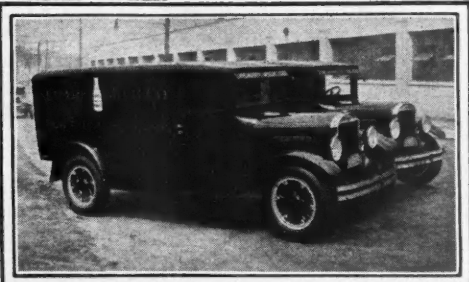
DURWYLLAN CO. at PATERSON, N. J.

ALLTRAFFIC BRAKE LINING WOVEN OR MOULDED

January, 1931

A complete line of in all capacities . . .

*La France Republic (Model A-1)
1 Ton Truck equipped with Model
"WO" Fuller Transmission*



*Stewart (Model 29XS) 2 Ton
Truck equipped with Model
"MKU" Fuller Transmission*



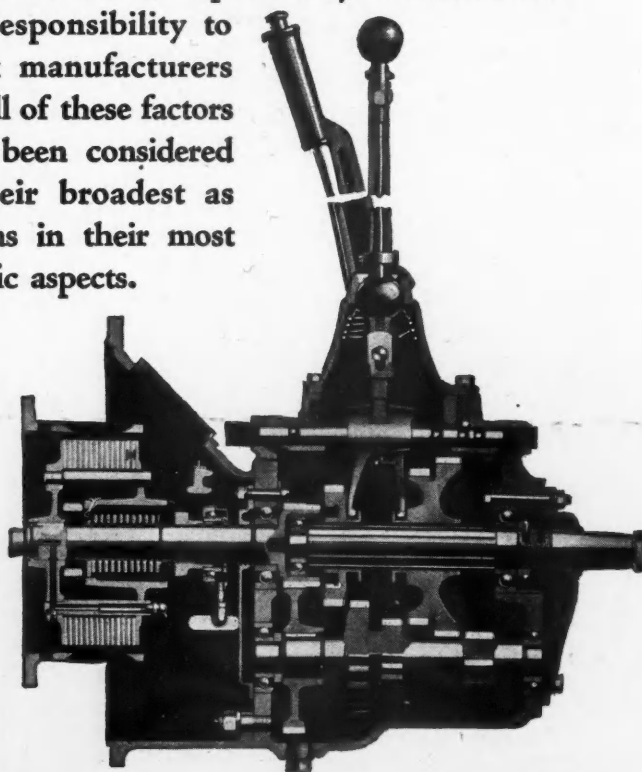
*Hug (Model 23) 2½ Ton
Truck equipped with Model
"MLU" Fuller Transmission*



Industry and commerce on wheels . . . moving ever-increasing tonnage over streets and highways . . . has developed the manufacture of transmissions into a highly specialized industry in itself.

Over a period of 29 years of specialization in this field, FULLER has achieved recognition as one of the foremost builders of a complete line of heavy duty transmissions.

Load and road conditions; truck design and operating requirements; economies of purchase and maintenance; responsibility of manufacture and responsibility to truck manufacturers . . . all of these factors have been considered in their broadest as well as in their most specific aspects.



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FULLER TRANSMISSIONS

for all types of trucks

Fuller heavy duty transmissions have been developed, in standard models, in a full range of capacities, for all types of trucks . . . short and long wheel-base; for acute angle and obtuse angle propellor shaft connection; for unit power plant and auxiliary installation . . . in 3, 4, 5, 8 and 12 speeds.

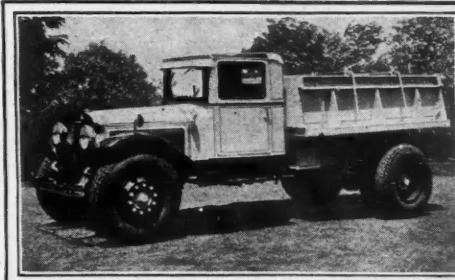
If you have a transmission problem, bring it to Fuller. Our engineers will gladly go anywhere for conference when either special or standard transmissions are being considered.

FULLER & SONS MFG. COMPANY

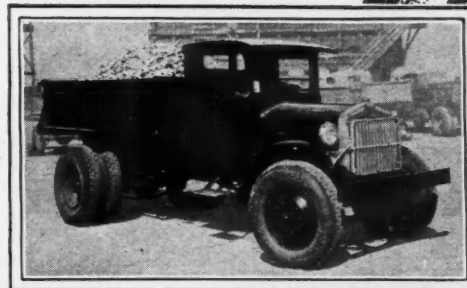
Division Unit Corporation of America
Bankers' Bldg. Milwaukee, Wis.



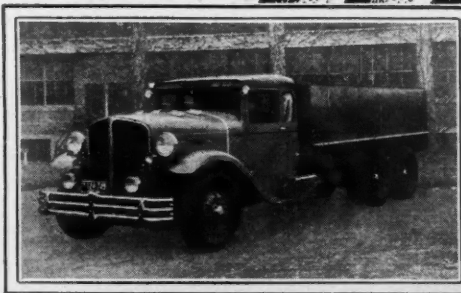
Le Blond Schacht (Model 30) 3-4 Ton Truck equipped with Model "MGU" Fuller Transmission



Sterling (Model DW-20) 5½ to 6½ Ton Truck equipped with Model "MRU" Fuller Transmission



The New Relay 12-Ton Duo-Drive Truck equipped with Two Model "VUOG" Fuller Transmissions

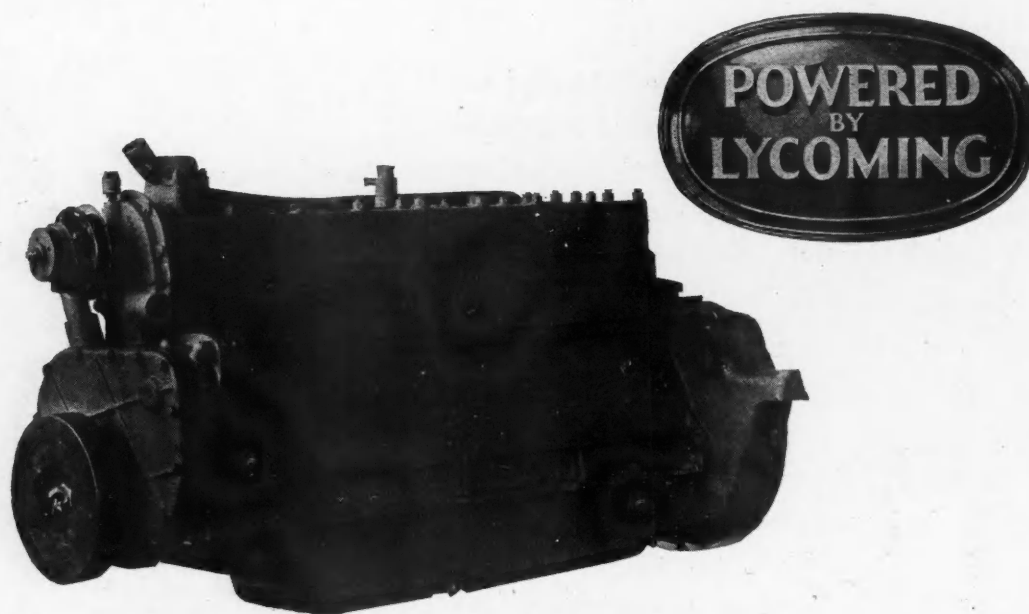


TRANSMISSIONS

TO FINISHED PRODUCT



—And Now Eight Cylinder Motor Trucks



Model AEC, 3¾ x 4¾, Eight Cylinder Truck Engine, 130 HP.

For years, builders of commercial cars using quality engines have looked to Lycoming for leadership in this direction. Now Lycoming takes another forward step by introducing Eight Cylinder Engines, especially designed for commercial application. The advantages of greater, smoother and more flexible power that have caused the Straight Eight engine to revolutionize the passenger car field, are now applicable to the industrial field in units engineered for this market by a manufacturer who has been a pioneer in Straight Eight design and building. In this Lycoming Eight cylinder engine, the length is not materially increased, so that in the majority of cases, interchangeability between six and eight cylinder engines of comparable output is possible without change in hood or cowl. Already a number of very prominent truck manufacturers have adopted the LYCOMING AE Series Eight Cylinder Engine as standard equipment. We predict within a short period of time a wide acceptance of the eight cylinder engine for commercial vehicles of certain types to which they are especially suited.

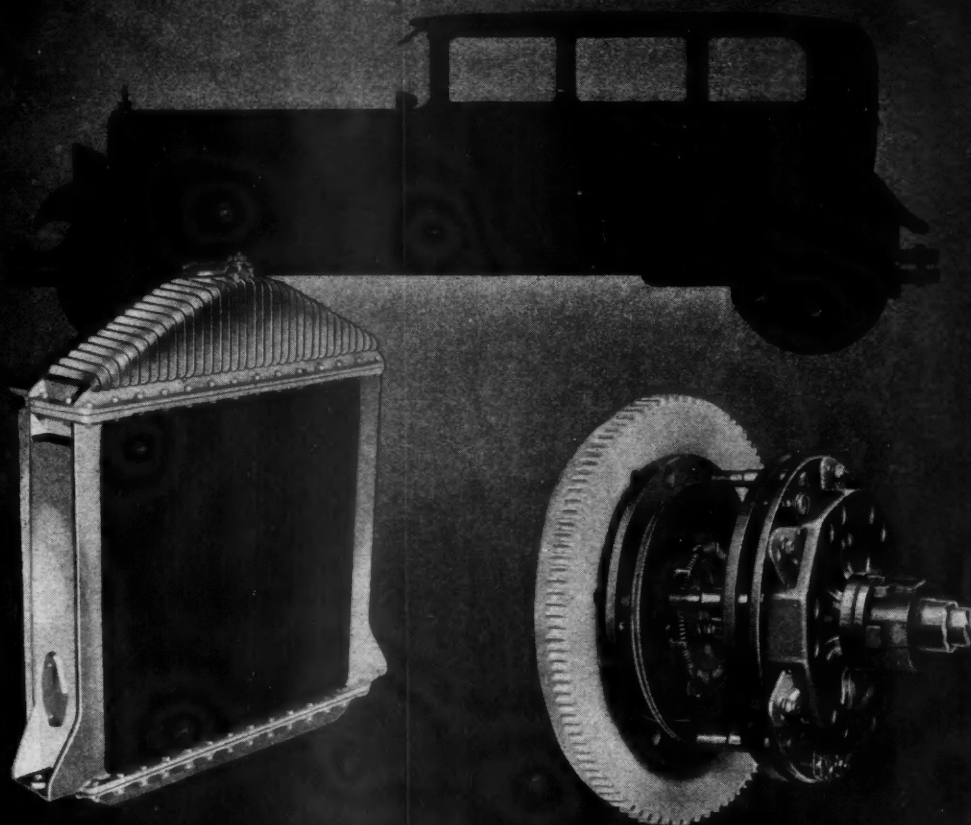
Write us for more information about the applicability of these engines to any commercial car problem.

LYCOMING MOTORS

LYCOMING MANUFACTURING CO.
WILLIAMSPORT, PA.

NOTHING FINER CAN BE SAID OF ANY MOTOR VEHICLE THAN "IT IS POWERED BY LYCOMING".

ANOTHER YEAR OF PROGRESS



**Serving the Automotive Industry since
1903. Radiators and Clutches for
Motor Cars, Buses, Trucks and Tractors.**

LONG



**LONG MANUFACTURING COMPANY
DETROIT, MICHIGAN**

**DIVISION OF
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Right on Schedule

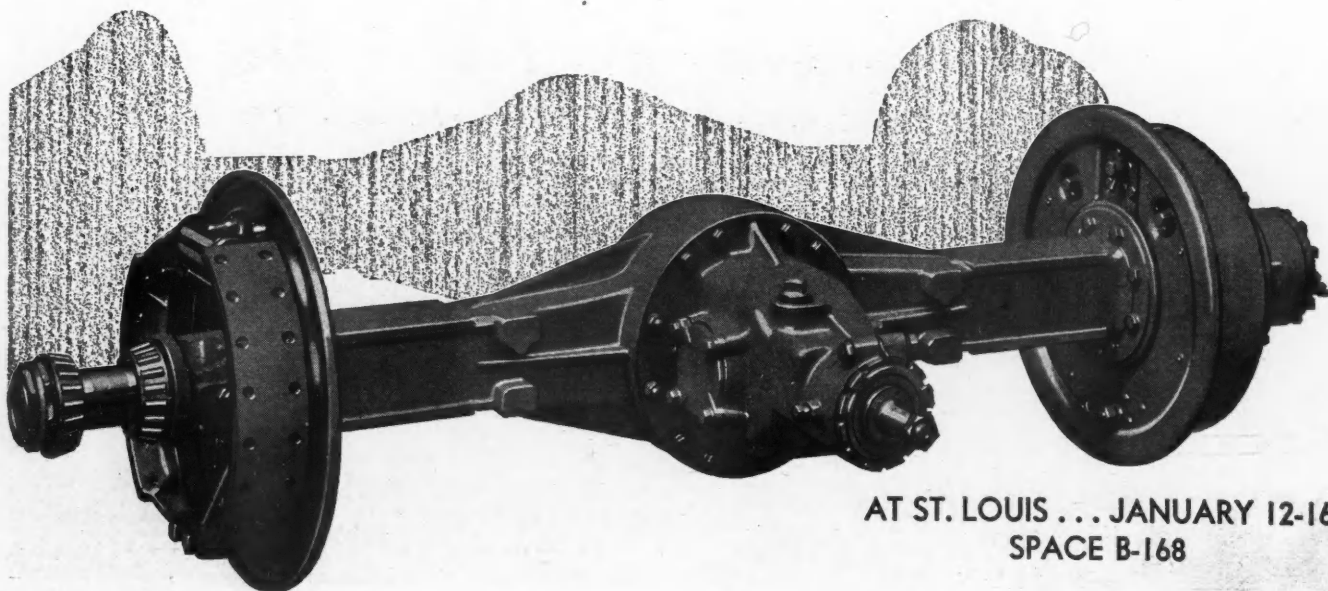


Profit in road building
— finished yardage per day, minimum costs — demands punctual
truck schedules.

Trucks equipped with Wisconsin Double Reduction Axles keep jobs
running smoothly; loaders handling dirt from the graders — on
schedule; sand, gravel, cement to the mixers — on schedule.

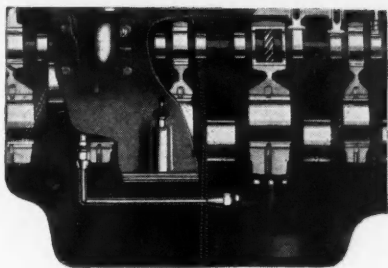
Wisconsin Axles are precision-built to stay on the job and out of
the shop. They do it, too, economically and efficiently.

WISCONSIN AXLE COMPANY
OSHKOSH, WISCONSIN



AT ST. LOUIS . . . JANUARY 12-16
SPACE B-168

Profit by the Mile



Cross section showing
special gear-driven
lubrication system

This van, one of the largest in the world, was built by Gramm Motors, Inc., to haul furniture for the Kroehler Manufacturing Company. It has 1300 cubic foot content—nearly half a freight car. It will carry sixteen complete suites of living room furniture. • It is powered with a Continental 21 "R" engine and, if desired, will maintain a road speed of 50 miles an hour when fully loaded.

Continental six-cylinder engines for this type of hauling are built to withstand the strain of high speed over long periods. Gear-driven pressure feed lubrication systems are built into all Continental engines. Interchangeable parts in the Continental "R" series permit keeping *all trucks on the road all the time*. Specify Continental—the most efficient and economic answer to power requirements of manufacturer and consumer.

CONTINENTAL MOTORS CORPORATION

Offices: Detroit, Mich., U. S. A. Factories: Detroit & Muskegon

The Largest Exclusive Gasoline Motor Manufacturer in the World



Continental Engines

ONLY A BATTERY *BUT--*

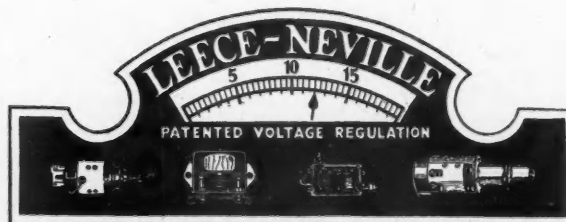
Voltage Regulation Minimizes Electric Maintenance

- 1 Battery cannot be overcharged.
- 2 The battery is charged only at the correct rate for its state of charge.
- 3 Battery will operate longer without requiring replenishing of electrolyte.
- 4 Life of battery greatly prolonged.
- 5 Lights can be operated direct from generator.
- 6 Loose connections will not cause lamp bulbs to burn out.
- 7 Makes most economical generator system.
- 8 Any Leece-Neville Voltage Regulated Generator can be used without battery.
- 9 Lamp life greatly prolonged.
- 10 Motor coaches fitted with Leece-Neville voltage regulated generators provide passengers with satisfactory illumination and safe transportation.

ONLY a battery. An insignificant item when you consider the total cost of your truck. But an all important item when you want to start in the morning. An all important item if it throws you down fifty miles from nowhere with a perishable load.

The only means a battery has of telling you of mistreatment is to cost you money in delays and in replacement charges. Don't give your batteries the opportunity to "talk back." Meet them more than half way with Leece-Neville Voltage Regulation.

Leece-Neville specializes in truck and coach electrical equipment. Consequently our units are engineered to eliminate a lot of electric maintenance cost and cut down delays in transportation. If you have any truck electrical problems our engineering department may be able to help you. We are sincere in our desire to cooperate with truck manufacturer and operator to provide more dependable transportation units. Write us.



LEECE-NEVILLE CO. — CLEVELAND, OHIO

PARISH

HEAT TREATED FRAMES

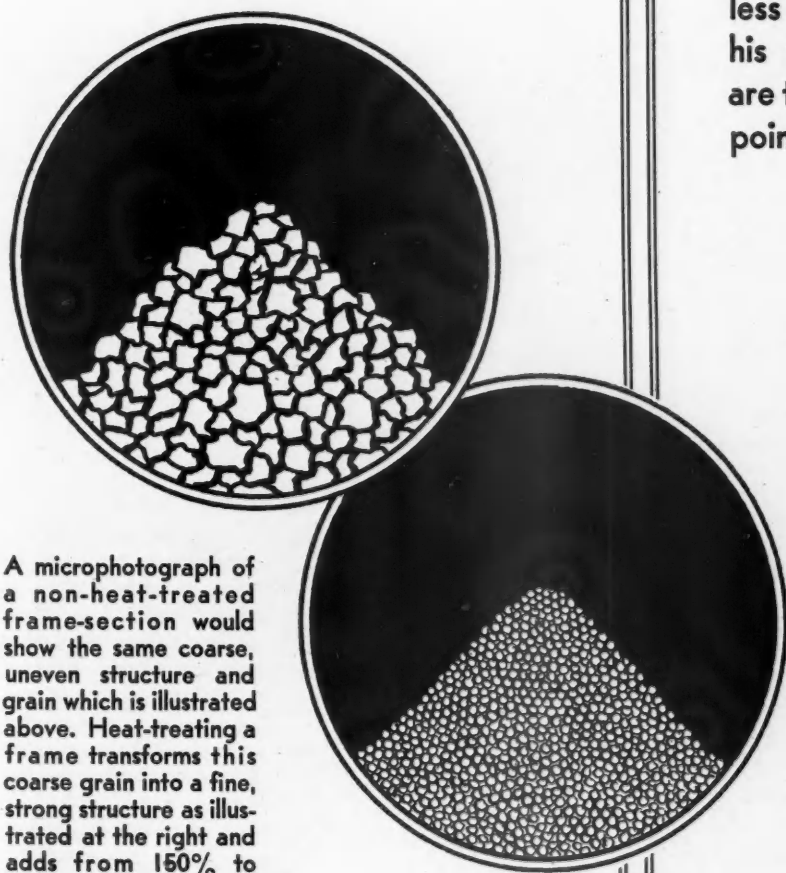
ARE A POSITIVE SELLING POINT

In the selling of trucks the salesman cannot have too many selling points. He may talk of engines, transmissions and clutches, but unless he talks frames all the rest of his points are useless, for frames are the foundation upon which these points must rest.

Parish Heat Treated Frames are not merely a talking point, they are a positive selling point and salesmen must arm themselves with the real facts concerning them.

We have illustrated below just one point: The Reason A Heat Treated Frame Is Stronger Than Any Other. Read it. Use it, and watch your sales increase.

A microphotograph of a non-heat-treated frame-section would show the same coarse, uneven structure and grain which is illustrated above. Heat-treating a frame transforms this coarse grain into a fine, strong structure as illustrated at the right and adds from 150% to 250% to the life of (the engineer calls it "Fatigue Value") the frame. That is why Parish Heat-treated Frames are used on 75% of America's Heavy Duty Trucks and Buses.

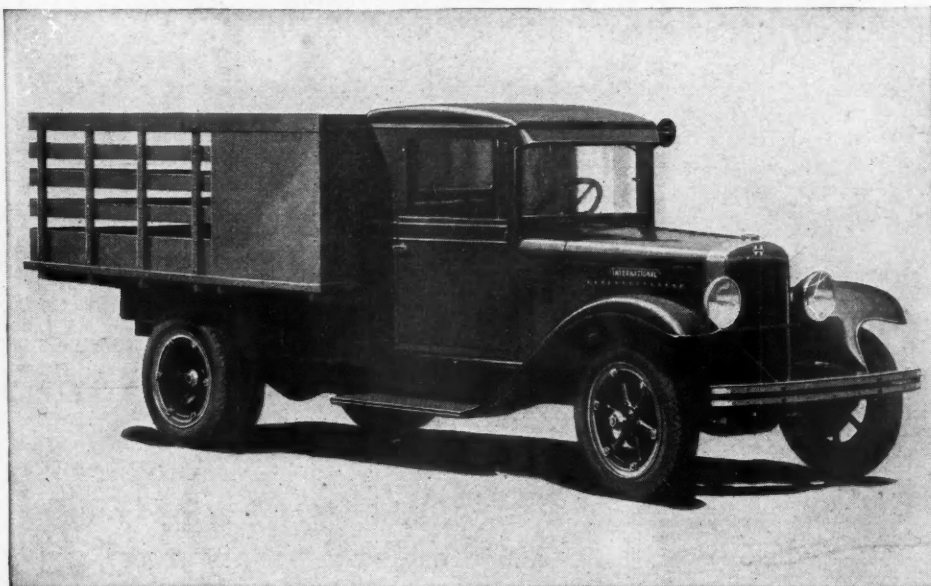


PARISH PRESSED STEEL COMPANY
READING PENNA.
DIVISION OF

ASSOCIATED **Spicer** COMPANIES

Here's the NEW

International Six-Speed Special



The new 136-in. wheelbase Six-Speed Special with standard stake body 8 ft. long by 6 ft. wide, with 36-in. stakes

NOW we round out the new line of International Trucks by announcing the new "Six-Speed Special."

Have you seen the celebrated "Six-Speed Special" going through its paces? This is the truck that gave the hauling world something entirely new in performance. It is the original heavy-duty speed truck with six forward speeds and two reverse speeds. It has a remarkable 2-speed axle through which its driver gets generous speed instantly on the hard road, or changes instantly to tremendous pulling power on any kind of tough going.

The original "Six-Speed Special" was sold everywhere. You can see these sturdy trucks working on steep hills, through mud and gumbo, in heavy timber operations, in farm fields, in the roadless oil fields, in and out of excavations and speeding along the highways everywhere.

BRIEF FACTS

Wheelbase: 136 inches.
Rated Capacity: $1\frac{1}{2}$ tons.
Engine: Powerful and unusually economical.
Clutch: Single dry-plate.
Transmission: 3 speeds forward, 1 reverse.
Final Drive: Spiral bevel gear of the 2-speed type, providing, with the transmission speeds, 6 speeds forward and 2 reverse.
Springs: Semi-elliptic front and rear. Auxiliary rear springs quarter elliptic.
Brakes: 4-wheel mechanical.

1931 Edition—Ready to GO!

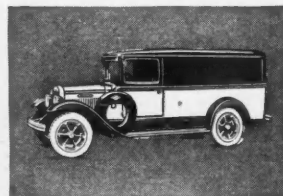
NOW we offer the handsome new model, retaining all the famous "Six-Speed Special" features—an even better truck in every way. Increased power, $1\frac{1}{2}$ -ton rating; smoother operation and handling; greater comfort for the driver; improvements throughout making for sturdiness and long life; and the handsome design of hood, radiator, and body that characterizes all the models in the new International line.

Come and watch this new "Six-Speed Special" perform. You'll admire its trim lines and speed on the delivery route. Its unequalled work on the heavy grade

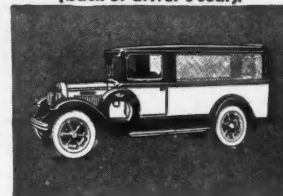
will amaze you and its economy is sure to please you. Any International Harvester branch or dealer will demonstrate the new "Six-Speed Special"—at your convenience and without obligation.

INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. OF AMERICA
(INCORPORATED) Chicago, Illinois

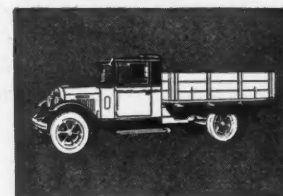
Body Types for all Requirements



The International Type C panel body for the Six-Speed Special is available in 8 or 9-foot lengths (back of driver's seat).



The Type C body is also available with screen sides, as shown in this illustration, or with glass sides.



The Six-Speed Special with 60-bushel grain box. This body is quickly convertible into a flat bed or into a roomy stock rack.



Dump bodies of $1\frac{1}{2}$ yards capacity are available in many styles for the Six-Speed Special.



INTERNATIONAL TRUCKS

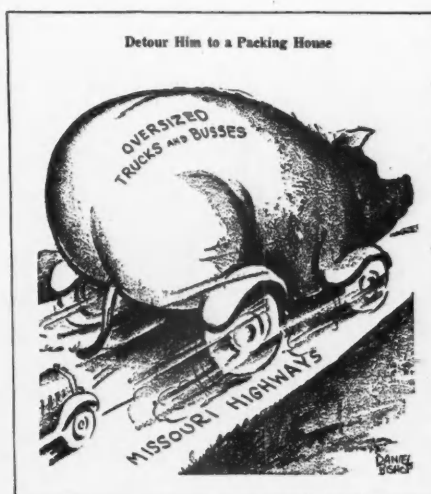
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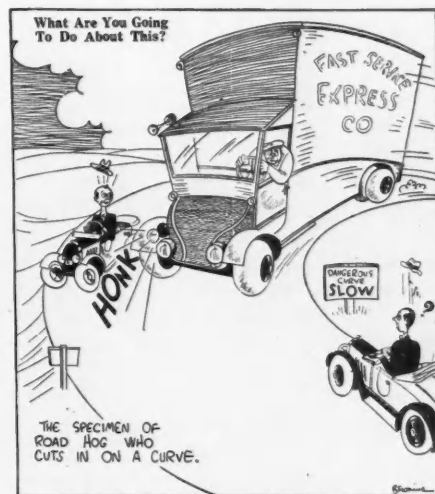
PHILADELPHIA, JANUARY, 1931

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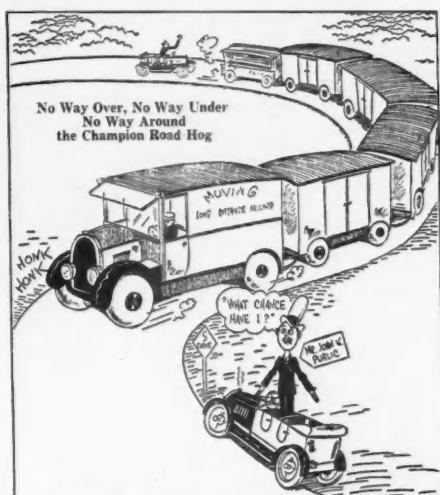
THIS ISN'T COMIC!



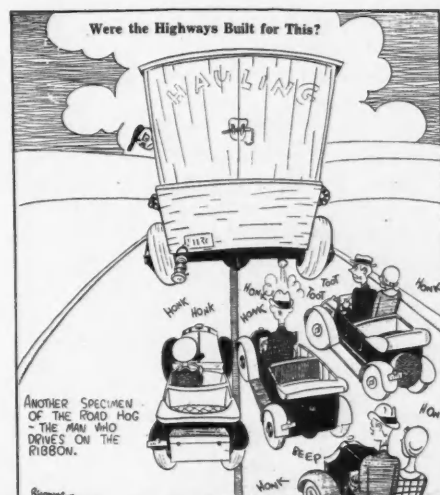
(St. Louis Star, October 8, 1930)



(Kansas City Star, September 23, 1930)



(Kansas City Star, September 18, 1930)



(Kansas City Times, September 23, 1930)

THIS IS TRAGIC!!!

Here's the story back of these "funny" pictures:

Out in Missouri a motorist was run off the road into a ditch by a truck-and-trailer train. Luckily for the motorist he escaped with only a ruffled dignity. But unluckily for truckmen, the motorist happened to be Henry S. Caulfield, Governor of the State of Missouri. Governor Caulfield got busy when he reached St. Louis. The state's Prosecuting Attorney and the Highway Commissioner—and the newspapers—took up the cudgels to curb what the Governor termed a "highway menace." The axe fell and special operating permits were canceled. Many trucks stand idle—and drivers along with them.

And all this because of one road-hog truck driver. The Governor of Missouri is wrong. Trucks and trailers are not a highway menace, but many drivers are. Such drivers create a public prejudice that is one load trucks can't afford to carry. Operators should see to it that their drivers observe road courtesies and should fire them if they don't.



TRUCKS MAKE EYES

Streamlining, Chromium, Paint
and Attractive Appointments
Send Truck Offerings at
National Show Off to a
Brilliant Start in 1931 Race

WHILE passing through the aisles of automotive exhibits at the 31st National Automobile Show at the Grand Central Palace, Jan. 3 to 10, in New York, a sweet young thing with mind chock full of passing fancies and a couple of "boy friends" was caused to pause pop-eyed, a multi-millionaire rapt in the Street's bearish vagaries suddenly stopped in his tracks and caught himself doing some undignified ogling, an absent-minded professor deep in the ashes of Pompeii came back to 1931 with a jolt, and even a surprise-hardened sport fan ruminating the relative merits of Londos and Shikat stopped with a stomach grunt—something startling must have been in the wind.

There was. Trucks. But what trucks! No wonder the passersby gawked. These trucks, carriers of the world's commodities, were more than just carriers; they were things of life and beauty. They possessed lines such as would have made Cleopatra writhe with envy, color in shades and combinations approaching the delightful nuances of Rembrandt, and fittings that would have paled the sumptuous settings of Louis XIV's dais at Versailles. (A beautiful piece of writing, you must admit, but what can you expect?)

● Smart Dress Wins ●

DURING the last few years truck makers have been doing things to their products. The "dress-up" mode had its inception with a few very attractive paint jobs. They went over big. Having tasted blood—to paraphrase a well-known proverb—truck buyers, sensing the advertising value of good-looking equipment, haven't let down since, demanding by shopping until they got what they wanted—attention-attracting, eye-appealing trucks. In the ensuing competition, appealing to the buyer's new harmony sense, designing engineers got down to their boards, assembled their tools and started to do big things with streamlining, paint and chromium. The chrysalis period was short and snappy. And now the truck enters 1931 with outer furbishments that will vie with its sister, the passenger car, for "looks" and will satisfy even the most particular truck sultan.

Exhibiting manufacturers displayed models of all capacities, ranging from the light ½-ton delivery units

up to jobs of 5 tons and over. Trucks were there with and without bodies. Models complete with bodies, designed for service in many different vocations, emphasized the great progress achieved by the modern freight carrier. There they were—de luxe delivery, panel, express, stake platform and especial—over 10 different makes, low and sleek of line, yet stolid with flowing fenders blending into long running boards, streamlined hoods, cowls, cabs and bodies. Bright-wear gleaming radiators, bumpers, head and tail-lights, etc., and

colors in pleasing combinations with artistic belting and piping.

Besides stimulating general public interest in truck development, the show represented an excellent opportunity for self-education for all members of trade or operation. It offered dealers, operators, independent repairmen and accessory merchants an excellent opportunity to see and study progress made by the industry during the last year, to get familiar with the details of new features and study competition. While the truck display, revealing improved performance as well as appearance, was the feature of the show from the truckman's standpoint, the large exhibition of parts, accessories and new equipment, especially for the shop, afforded maintenance men an opportunity to make a mental check of their individual shops and speculate as to the labor and time-saving desirability of this or that item.

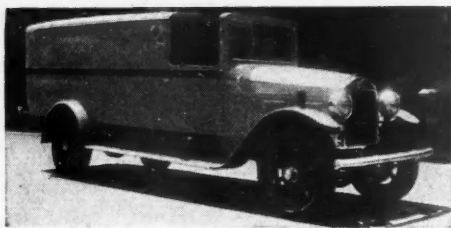
● Looking Them Over ●

GENERAL public interest in the commercial vehicles manifested itself in many forms, some very humorous. Imagine, if you can, a monocled member of the elite lifting a truck hood and peering stiffly within apparently understanding and enjoying the mechanical perfection. Not at all remarkable at the 1931 show. And the wise-cracks were good enough to wrinkle the face of a wooden Indian. Here's one overheard somewhere around the Stewart booth: "Yeah, and they cut 'em at the corners to give 'em that come-on figure." Another, elicited from a benevolent old gentleman from up-state, arrested by the colorful display of the Diamond T exhibit, was: "Gosh! they're good enough to take the family into town for a show."

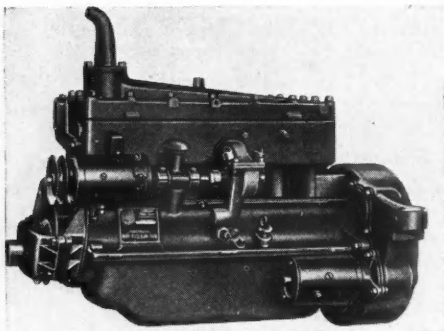
Ten truck models, attractive enough to induce an imperious Fifth Avenue debutante to mount the cabs and

POP AT GOTHAM SHOW

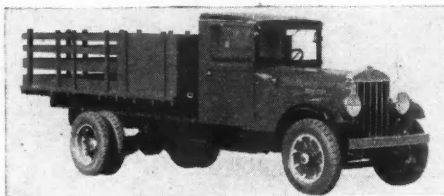




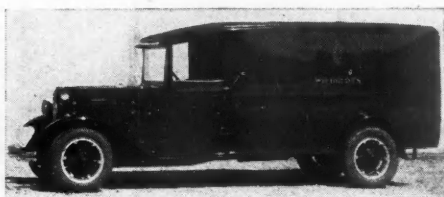
Corbitt 1 1/2-ton chassis fitted with a delivery body simulating the lines of a town car



Left side of Continental Model 17-E L-head, 3 3/8 x 4-in. six-cylinder job displayed at show



Reo Model GA 3-ton truck, equipped with a de luxe closed cab and a stake-type body



Low and long streamlining characterized panel delivery models exhibited by Diamond T

personally test the solid comfort of the seats, or her immaculate escort to flatten a knife-like crease by bending a knee to examine the air brakes on an intercity job, composed the Federal exhibit. The display included practically every outstanding model in the Federal line, ranging from 1 1/2 to 5 tons with four and six wheels and equipped with special bodies as well as stake, canopy-express and dump.

"Yes, sir," was the remark overheard by an innocent bystander in the Reo booth, "if the chromium in one of them trucks was made into nose-rings, you'd have enough to fix up all the flappers in Congo and maybe Harlem." The stellar exhibits in the Reo booth were the new Super Tonner and Model GA, 3-tonner, equipped with closed cabs and stake bodies. As a description of these models appears on page 41, greater details here would be superfluous.

A pair of pedal extremities, neatly shod in patent-leather and pearl-gray spats, projecting from under a chassis, with their owner lost under the powerplant, would not have been a remarkable spectacle in the Studebaker booth, where five brand-new Pierce-Arrows held forth. One might expect it of an entirely new line, especially when built by a manufacturer that built its first truck in 1911. However, those not caring to crawl can acquire the desired information by perusing the details given on page 42 of this issue. The exhibit also included the commercial car line of the S.P.A., embodying the 1 1/2 and 2-ton chassis with delivery, funeral, ambulance and special-purpose bodies.

"Lookit, Mame," exclaimed an enthusiastic East Sider, dragging his flamboyant dancing partner over to LeBlond-Schacht's 1 1/2-tonner. "Lookit that there trellis stuff; wouldn't that give your cat kittens?" Mame's friend had reference to the horizontal louvers, sweeping fenders and smooth lines generally of the de luxe Series 10.

Everywhere appearance inspired comment, and more or less along the same line. A farmer from Mohawk Valley, looking over the Corbitt display, after goshing a couple of times,

was reported to have mumbled: "Whew! I wonder what Mary'd say if I took one of those things back home and told her it was a truck?" A delivery unit, simulating the luxurious lines of a town car, probably gave rise to this sod-bursting expression. Four chassis models, one four and three sixes, ranging from 3/4 to 1 1/2 tons, was the Corbitt presentation for 1931.

"Looks like a post-graduate course in interior decorating, if you should ask me," one operator was overheard saying to another, nodding his head in the direction of a group of serious-minded gentlemen of artistic mein, huddled in one corner of the General Motors booth. And well it might have been, because the skillful handling of colors in the finish of the front ends and bodies of the five models on display fascinated all. Units on display ranged from the 3/4 to the 3-ton range. Model T-44, 15,000 lb., straight rating, was equipped with a factory cab, dump body and air compressor; Model T-30, 11,000 lb., was equipped with a factory panel body converted into an armored truck; Model T-19 was shown with a 10 1/2-ft. panel body, and T-15, 5400 lb., was furnished with a 6-ft. panel body. General Motors also exhibited five other models in the Hotel Astor, with panel, express and stake bodies.

● Engine Exhibits ●

INCLUDED in the body exhibits were new products offered by Hercules Products, Inc., and The Metropolitan Body Co. Hercules displayed for the first time a full-refrigerated body, a mechanically refrigerated ice-cream body and an outdoor advertisers' body. All were graceful of line, attractive in finish and constructed of hardwood. The full-refrigerated job has two refrigerating compartments, either or both of which is cooled by the same tank. Three compartments are built in the mechanically refrigerated body. The front compartment is for handling brick and other ice cream requiring low temperatures. The remaining compartments, center and rear, are designed for general purpose where very low temperatures are not essential. Access to the center compartment is attained through side doors and to the rear compartment through a rear door. An empty-can compartment is provided under the floor and is entered through doors at the rear. The mechanical refrigeration unit is located back of the cab and can be operated by local light current or a small stationary gasoline engine.

Metropolitan's Metro Insulated Couplex cab made its first public bow

TRUCKS MAKE EYES POP AT GOTHAM SHOW

at the show. The features of the cab are a one-piece steel roof, insulated air pockets between inner and outer walls, three-point mounting utilizing ball bearing and compensating springs, adjustable seat and lazyback, soft-spring, air-type cushions, one-piece windshield and two-piece rear window.

Engine manufacturers were well represented by the products of Lycoming, Hercules and Continental. In addition to its regular line of truck engines, Models AFE, $3\frac{3}{4} \times 4\frac{1}{2}$, four-cylinder; WTG, $3 \times 4\frac{1}{4}$, six-cylinder; ASD, $3\frac{3}{4} \times 4\frac{1}{2}$, six-cylinder, and TS, $3\frac{3}{4} \times 5$, six-cylinder, Lycoming Mfg. Co. introduced two new eight-cylinder engines, Models AED and AEC, described in detail on page 29 of this issue. Featuring the four and six-cylinder exhibit of the Hercules Motors Corp. was the Hercules HX series of six-cylinder engines displayed for the first time. The new series consisted of five sizes, ranging in horsepower up to 175. Complete information will be published in the February issue. The truck-engine display of the Continental Motors Corp. included Model W10, a four-cylinder, $3\frac{3}{4} \times 4\frac{1}{4}$ -in. engine designed for light, fast delivery trucks; Model 17E, a $3\frac{3}{4} \times 4$ -in. six-cylinder engine, and a cutaway model of Model 20R, which is one of four sixes in the Continental six-cylinder, valve-in-head R series.

M ● Parts Displays ●
MANY parts makers were at the show, bringing to the public's attention a more intimate understanding of their products as well as new improvements made through the year. Ross Gear & Tool Co. exhibited two truck sizes of roller-mounted steering gears, cutaway parts revealing principles of mechanism and photographs of unusual applications. Included in the range of steering gear sizes shown by the Gemmer Mfg. Co. were two worm-and-sector and two worm-and-roller type units having capacities from $\frac{3}{4}$ to $2\frac{1}{4}$ tons.

Bragg-Kliesrath Corp. was prepared to reveal to anyone not familiar with the principle of vacuum boosting how the B-K booster utilizes engine vacuum for amplifying foot pressure when braking. Of particular interest to truck operators in the exhibit of the Packard Electric Co. was the Packard Camoah Kit, a new item consisting of a 100-ft. spool of Lac-Kard Ignition Cable, a complete assortment of terminals and rubber protectors and a special carton which enables the user to draw out the required amount of cable and attach all necessary terminals without soldering.

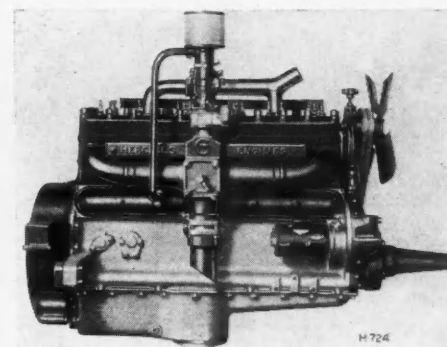
Titeflex Metal Hose Co. exhibited its all-metal flexible tubing for fuel lines and demonstrated the ability of Titeflex to absorb vibration by means of a flexing and vibratory machine, showing the tubing carrying liquids and gases under pressure. Aluminum parts entering into truck construction, such as structural shapes, sheets, rivets, bolts, castings and forgings, were displayed in the booth of the Aluminum Co. of America. Federal-Mogul Corp. displayed undersize connecting rods and main bearings, babbitted connecting rods, piston pin bushings, bolts and nuts, laminum shims, babbitt metal and bronze bars.

Among the exhibitors of shop equipment was the Weaver Mfg. Co., showing for the first time its new heavy-duty automatic brake tester and wheel-alignment indicator of the drive-over type for trucks and buses, description of which appears on page 45. A complete line of engine-reconditioning equipment, including valve refacers, valve seat reamers and reamer sets, kits for valve-seat recondition and carbon cleaning, drills and drill stands for driving hones, and portable electric polishers was exhibited by the Van Dorn Electric Tool Co. A transmission-mounted tire pump for Ford AA trucks was the feature of the Kellogg Manufacturing exhibit. It has a 2-in. bore and $1\frac{3}{4}$ -in stroke, runs from 300 to 500 r.p.m. and displaces from $1\frac{1}{4}$ to $1\frac{3}{4}$ cu. ft. per min. Similar pumps in one and two-cylinder sizes were also offered to fit many other trucks. John Bean Mfg. Co. had a varied display of drum lathes, relining machines, car washers and truck brake testing units.

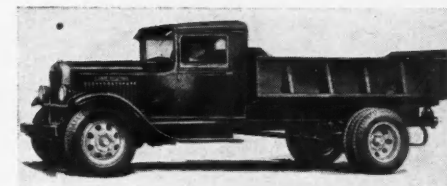
The drum lathe has a three-speed spindle and a maximum swing of $48\frac{1}{2}$ in. for accommodating all sizes of drums and is built low to make the handling of heavy wheels easy. The lathe can also be furnished with fly-wheel equipment. The Bean Universal brake tester is of the drive-over type and will accommodate two or four-wheel brakes of trucks up to 10 tons. The unit is installed flush with the floor and has a wheelbase range of from $8\frac{1}{2}$ to 21 ft. Bean car washers come in four models with two or three cylinders and one or two guns.



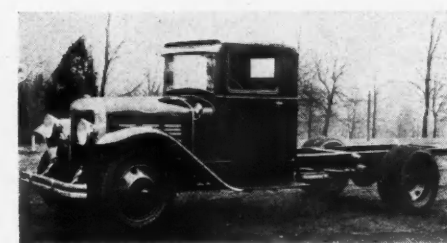
Federal's Model U6 3-ton dump truck, one of a large number of units shown at the show



One of the five new models included in Hercules new HX Series of 6-cylinder jobs



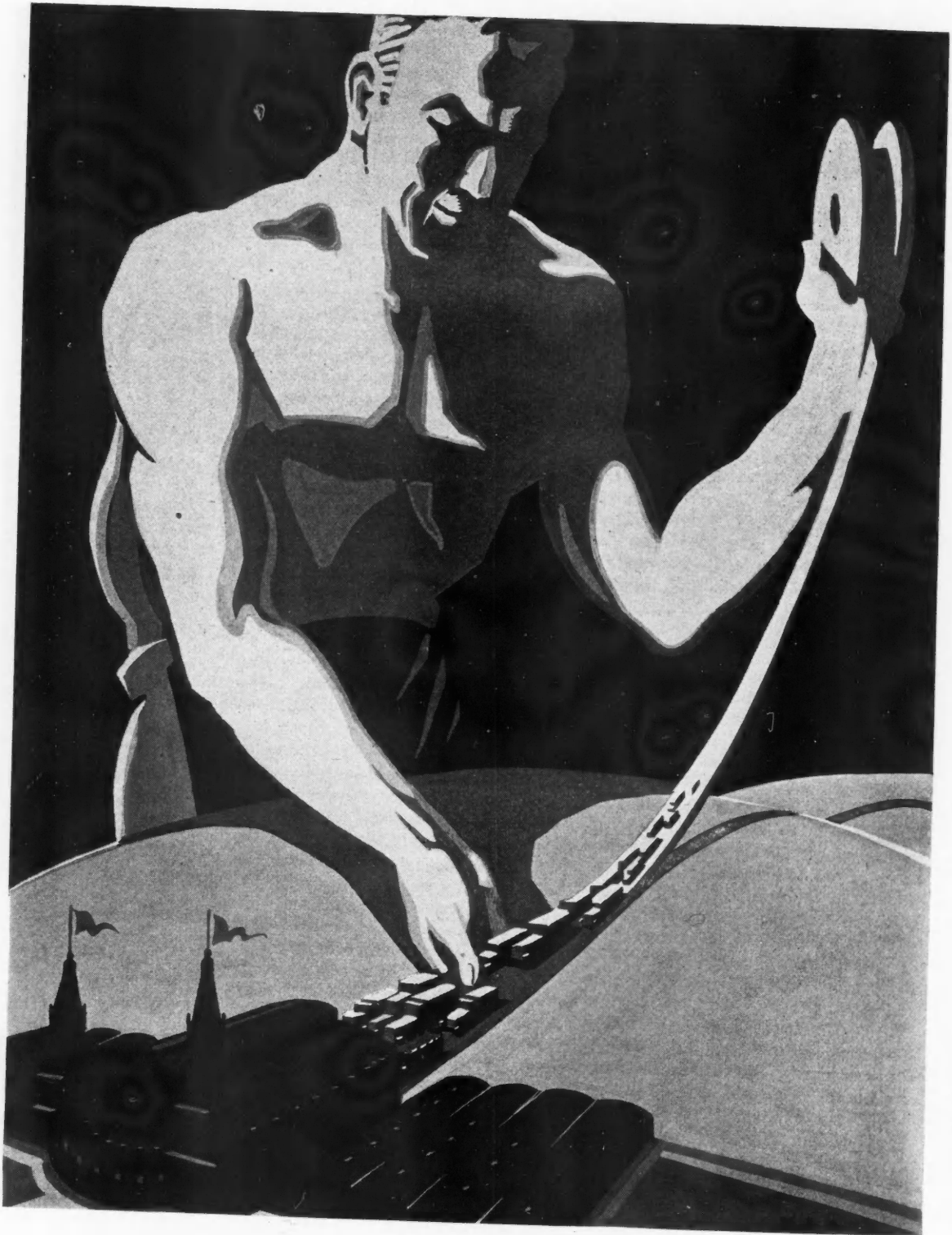
G. M. C. Model T-44, straight - rated at 15,000 lb., equipped with factory cab and dump



Chassis of LeBlond-Schacht's de luxe $11\frac{1}{2}$ -ton truck, equipped with a factory-built cab

OFF TO A BRILLIANT START IN 1931 RACE

ROAD SHOW PAVES WAY



FOR DANCE OF BILLIONS

WHEN depression and unemployment, a couple of struggling tragedians, tolerated by too many audiences and publicised by reams of newsprint, attempted to pull their notorious sob-stuff on the road-builder's stage last year, they found the builders about as receptive as Maggie receiving Jiggs after a night at Dinty Moore's. Yanked by the proverbial hook and followed by a cloud of fare-you-wells of the good old substantial variety—over-ripe tomatoes, cabbage, well-aged eggs and what have you that you don't want—that which started as a tragedy ended as a comedy and was tragic for the tragedians only.

Supported by county, state and nation the road building industry wasn't in a mood to submit meekly to the mournful antics of the gloom-twins, but instead kept its face determinedly to the ground throughout 1930, and achieved an all-time record of road laying. Expenditures by all departments of the government, instead of trending downward, reached a new high record of some two billion dollars. And that isn't all. Judging from present indications the prospects for America's road-building giant for 1931 promise to take on a still rosier hue, a hue of more than two and a half million brilliance.

● **Road-Building Bright Spots** ●

ONE big gob of pink is the increased Federal aid for the next three years, which forecasts a continuation of these annual expenditures, with further increases likely. President Hoover's signature on the Relief Bill for furtherance of road programs is another daub of color of no dull tint. The Bill makes available \$80,000,000 for states without funds to be advanced for immediate road construction. The President has also called highway leaders to the White House for conferences on general business promotion to offset the industrial depression and has set highway construction in the first place on the list of remedies for the unemployment situation.

All of which makes the occasion of the American Road-Builders' twenty-eighth annual show and convention in the St. Louis Arena, Jan. 12, most auspicious. The show of over 300 exhibits will be staged entirely on the ground floor of the mammoth Arena and will present a more diversified display than ever before of every instrument with which the modern road builder accomplishes his task. Here, housed under one roof the road builder can inspect

Talk and Signs of Depression Still Find the Highway Construction Industry Deaf, Dumb, Blind, Smiling and Busy as Enormous Activity in 1931 is Projected by States

Proposed Expenditures on State Highways, 1931

Alabama*	\$15,900,000
Arizona	6,500,000
Arkansas	15,000,000
California	30,000,000
Colorado	5,000,000
Connecticut	12,600,000
Delaware	2,200,000
Florida	12,000,000
Georgia	18,000,000
Idaho	5,500,000
Illinois*	31,600,000
Indiana	24,000,000
Iowa	30,000,000
Kansas*	13,700,000
Kentucky	20,000,000
Louisiana	30,000,000
Maine	13,100,000
Maryland	11,000,000
Massachusetts	20,000,000
Michigan	30,000,000
Minnesota	15,000,000
Mississippi	6,100,000
Missouri	33,500,000
Montana*	4,500,000
Nebraska	10,000,000
Nevada	3,000,000
New Hampshire	5,500,000
New Jersey	36,000,000
New Mexico*	5,650,000
New York	60,000,000
North Carolina	11,000,000
North Dakota	3,500,000
Ohio	34,000,000
Oklahoma	16,000,000
Oregon	10,000,000
Pennsylvania	60,000,000
Rhode Island	4,300,000
South Carolina	22,500,000
South Dakota	6,000,000
Tennessee	12,000,000
Texas	45,200,000
Utah	4,000,000
Vermont	5,100,000
Virginia	17,000,000
Washington*	12,500,000
West Virginia	14,300,000
Wisconsin	33,000,000
Wyoming	5,000,000
Proposed State Highway Expenditure	840,000,000
Federal Aid	125,000,000
Special Federal Appropriation	80,000,000
Federal Construction	13,000,000
Estimated City Expenditure	875,000,000
Estimated County Expenditure	660,000,000
	\$2,593,000,000

* No estimate returned by state highway department. 1930 figure used.

Note—This list does not include any appropriations that will be created by the 44 legislatures which meet in January.

all the latest developments in road-building equipment designed to improve methods and lower costs of both road construction and maintenance. The automotive industry will be well represented at the show with more than 25 per cent of the total show space being devoted to such



FWD, 3 1/2-ton, with snow plow



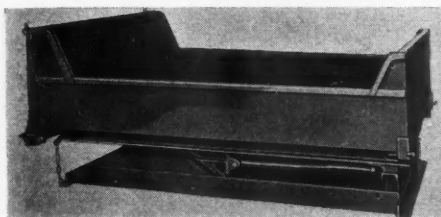
Relay, 2 1/2-ton, with Heil dump



White 63 dump with trailers



Hug 85D for excavation work



Hercules rotary power dump body



Autocar C with Paris Mixer

January, 1931

automotive items as trucks, bodies, trailers, cabs, engines, hoists, tanks, mixers, compressors, graders, scoops, scrapers, snow removal equipment, spreaders, sprinklers, sweepers, tools, welders, wheels, winches, wrenches, etc. Besides this display of regular road-building equipment the show management has introduced a new feature, a motor freight exhibit. A special section of one of the exhibition buildings will be set aside for the exhibit of everything used in connection with motor freight transportation. The object of the freight exhibit is to display the many different truck units, trailer units, tires, and accessories that make up the equipment of the motor freight industry, thus bringing its progress to general attention, and especially to the road builder.

The truck industry, according to preliminary announcements received from manufacturers, will display with offerings especially designed for the many diverse needs of road construction and maintenance. Trucks will be there for light and heavy-duty dump work, for trailer operation, for transporting ready-mixed concrete, for mixing concrete, for attaching snow plows and scrapers, for utility service such as carrying equipment and building materials, and to provide power through take-offs to operate compressors, air pumps and winches.

• At the Show •

In addition to its standard 1 1/2-ton, 136-in. wheelbase truck chassis, equipped with a 1 1/2-yd. gravel body, power hoist and portable compressor, Dodge Brothers will display other models equipped with dump bodies, road scrapers, snow plows and accessory equipment applicable to road-building work. Dodge Brothers will also exhibit at the Motor Freight Exposition a 3-ton, 195-in. drop-frame chassis with furniture van body. Four Wheel Drive Auto Co. will show a 3 1/2-ton Model CU-6 commercial utility job equipped with body and hoist and its 7 1/2-ton Model M-7, one of the two heavy-duty models brought out late last summer. Relay Motors Corp. exhibit will be featured by its latest development, a 275-hp. twin-engine, Duo-Drive six-wheeler, designated as Model 300-A. This new unit, presented as the most powerful truck on the market, is described on page 38 of this issue. In addition, Relay will display one of its 40-A Series, a 2 1/2-ton chassis equipped with a Heil body and hoist. Five models will make up the exhibit of the International Harvester Co., one of which, Model A5, will be displayed in the Motor Freight

ROAD SHOW FOR DANCE

Section. The International Six-Speed Special will be shown equipped with a dump body and the other models with hoists and bodies of 2 1/2-3 and 4 yd. capacity.

• Truck Equipment •

TWO special chassis will be featured by the Autocar Co. One of these units will be the 3 1/2-5-ton, 186-in. wheelbase, Model C, six-cylinder, 101-hp. chassis equipped with a 3-yd. Paris Transit Mixer body. The companion unit will be Model SCHS, a 157-in. wheelbase, 3 1/2-ton, six-cylinder job equipped with a Wood hydraulic 3 1/2-yd. body with extension sides and two division boards. This model is equipped with an auxiliary transmission and is capable of 45 m.p.h. under full load. Three trucks for road construction and maintenance and for freight and long-distance hauling will be exhibited by the White Co. They will be Model 63, a six-cylinder job, with Wood hoist and dump body having two swinging partitions; Model 212, a fast, small-capacity, four-cylinder truck, equipped with a Heil hoist and 2-yd. dump body, and Model 64, a six-cylinder chassis of 157-in. wheelbase for heavy-duty dump trailer operation. A complete line of road-building transportation equipment, including trucks for single batch, double batch, excavation and dirt-moving work and for the transportation of ready-mixed concrete will be exhibited by the Hug Co. The display will include Model 60, a single-batch truck, with 2-yd. Camroller gravity-type body; Model 85-E, a four-cylinder, five-speed dirt-moving truck with a 3-yd. power-hoist body; Model 87-M, dirt-moving and excavation work model, providing seven speeds and an overgear drive for empty return trip, equipped with a 4-yd. power-hoist body; Model 67, for highway and city street maintenance, equipped with a Commercial three-way dump truck body; Model 87M, with a special Trucktor unit which converts the regular four-wheeler into a six-wheeler and in addition provides a track for the two sets of rear wheels; Model 97-6, equipped with an auxiliary rear axle and 6 1/2-yd. hydraulic underbody power-hoist body, and Model 23, a light dump truck of 2-ton capacity.

The display of the Federal Motor Truck Co. will consist of four models, namely Model D, 1 1/2-ton, with 1 1/2-yd.

The Commercial Car Journal

PAVES WAY OF BILLIONS

dump body; Model A-6, 2-ton, with 2-yd. dump; Model T10B, 2½-3-ton, with 3-yd. body, and Model 4C6A, 4-5-ton chassis. Several new features have been incorporated in the concrete conveyor body to be exhibited by Clinton Motors Corp. The size of the discharge door in the rear has been increased to 16 x 34 in., practically twice the former size, and rear of tank is now mounted in a heavy steel cradle and revolves on roller bearings. This concrete body will be mounted on a Clinton Model 90-6 5-ton, seven-speed chassis. The Clinton display will also include a 3-ton Model 65-6 chassis, equipped with a 3-yd. concrete body and Wood Hi-Lift hoist. The Linn Tractor, powered by a 100-hp. engine, rated at 10-ton carrying capacity and 25 to 100-ton towing capacity, will be exhibited by the Linn Mfg. Corp. This tractor embodies a flexible crawler which adjusts itself over uneven ground and distributes the load equally throughout the ground-contacting surface. A crawler attachment for Ford trucks will be featured by the Trucktor Corp. The attachment consists of an extra pair of dual-tired wheels, special spring suspension and steel tracks. Lee Transit Mixer Co. will show its new 1-yd. transit mixer for mounting on light trucks. The mixer, which is rotated by the truck engine, may be rotated either forward or reverse and can be stopped in any position.

● Bodies and Cabs ●

THAT road builders will not want for the latest in body, cab and hoist equipment, even the most casual observer at the Road Show will testify. Truck equipment makers, anticipating new needs and improved methods, have kept well in step with the times and will offer many new developments at the show. Besides a display of various capacity dump and gravel bodies, the Galion Allsteel Body Co. will exhibit its 3-ton hydraulic hoist designed for ¾ to 1½-ton trucks and hand hoists. The hand hoists operate on the roll-back feature which is claimed to ease hand operation and quicken dumping. An automatic roller lock is another improvement which instantly locks the moment the operator removes his hand from the crank.

Besides its 4-yd. Iron Mule dump body for mounting on industrial tractors and its Roustabout crane, the

Hughes-Keenan Co. will exhibit its No. 5 heavy-duty hydraulic hoist which is available with various types of Hughes-Keenan bodies. The hoist has a horizontal 5-in. cylinder and is supplied as a completely assembled unit ready to drop in place on a truck. Superior Body Corp. will display a complete line of dump bodies in gravity, hand hoist, mechanical and hydraulic types for all trucks. In the booth of the Perfection Steel Body Co. will be found a Model 100 mechanical hoist and 1½-yd. dump body; Model 41 combination hand hoist and gravity dump body in one unit which can be converted into either type in a few seconds, and Model 21, a quick-acting gravity dump body with control in cab and fitted with a double-acting tailgate.

● Hoists and Engines ●

THE center of attraction of the Heil Co. exhibit will be its new Model 5-26 Hi-Lift unit, designed for use with wet concrete bodies. Besides the usual straight rear dump position, this unit in its high position gives 7½ ft. clearance under tailgate. The unit will be fitted with a 3-yd. Model 30 Heil body. Other exhibits will include Model 51, 2½-yd. dump with removable sides fitted with a No. 3 Heil hydraulic hoist; a heavy-duty dumping unit consisting of a 3-yd. Model 11 body and No. 4 hydraulic hoist; a premier showing of the new light-duty WB unit which consists of a 1½-yd. body and No. 1 Heil hydraulic hoist listing at \$225. A Sleeper cab and a new all-steel cab will be the feature exhibits of the Highland Body Mfg. Co. The Sleeper cab, which is about 28 in. longer than the regular cab, has two compartments, one for driving and the other for berth and storage, four standard doors and a ventilator in the roof. Interior trim is in Spanish artificial leather. Both cabs are mounted with the Highland rocker sill, giving three-point suspension. Hercules Products, Inc., plan to display an assortment of dump bodies of hydraulic and automatic types and a line of small engines. A complete line of hoists and dump bodies will be exhibited by the St. Paul Hydraulic Hoist Co.

Several makers of powerplants for trucks as well as conveyors, concrete mixers, compressors, generators, etc., will be at the show with their latest developments. Wisconsin Motor Co. intends to show Model 2 of its Series D of six-cylinder engines. Model 2, 5¼ x 6½ in., develops 105 hp. at 2500 r.p.m. Wisconsin will also show its 1½-ton and 5-hp. air-cooled engine for operating auxiliary road-building equipment. The display of

Continental Motors Corp. will consist of its H24 four-cylinder valve-in-head engine with bores of 5¼ and 5½ in. and strokes of 5¼ and 6½ in.; Model P 640 power unit, 3¾ x 4-in., six-cylinder, and Model M9, a four-cylinder L-head, 4¼ x 4¼, industrial engine developing 31 hp. at 1200 r.p.m.

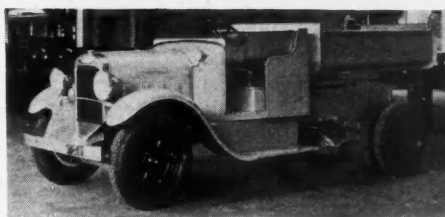
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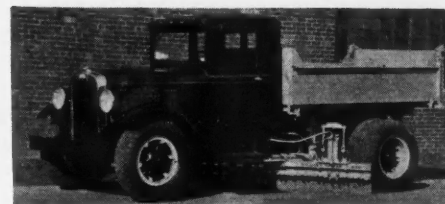
Trucktor unit applied to Ford



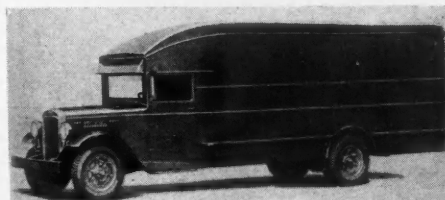
Linn tractor model 6-28-D



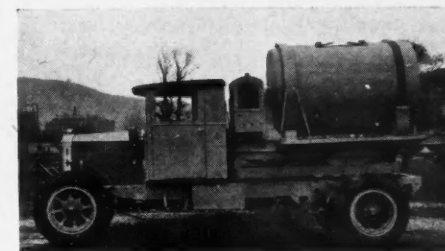
Federal D, 1½-ton, with dump



Dodge, 3-ton, dump and scrapper



Dodge, 3-ton with van body



Clinton chassis and conveyor

WHAT SHOULD THE

An Answer to a Question Which Provokes
So Hot a Table-Thumping Discussion
Whenever Fleet Operators Get Together
That They Can't Keep Their Shirts On

By Joseph Geschelin

WHEN it comes to governors for motor trucks, fleet operators are divided into two camps: those who do and those who don't. By this division we mean those who do favor governors and those who don't like governors. Both camps are made up of strong partisans for their respective causes. It takes but one "doer" and one "don'ter" to start an argument. Three of four on each side bring about a debate. Let a dozen or more fleet men in one room start on the subject of governors at night—the slowly rising sun will beam upon a smoke-filled room, a snoring bell-hop and two groups of men at opposite sides of a table, tired, hoarse, determined and unconvinced.

Arguments about governors cannot be dismissed as idle chatter. Those who favor governors include some of the largest and most able fleet operators in the country allied with many smaller, and none the less able, fleet owners. They claim the balance sheet leans heavily on the governor side. Opposed to this group are large and small fleet owners of recognized ability who don't like governors and believe that they are as well, or better off without them. Being men of talent, those in each group are prepared to back up their conclusions with reasons which cannot be laughed aside.

Part at least of the sharp difference in opinion is due to the fact that some are considering governors from a different viewpoint than others. Unless all parties concerned understand, and agree upon, the purposes for which governors are adopted, discussion and argument get nowhere, except into the wee small hours.

A governor on a truck is a servant

of the owner, charged with the duty of controlling speed in accord with its master's orders. Practically all governors now in use are attached to, or embodied in, the engine. By changes in parts or adjustment or both they can be set to maintain any desired speed of the engine whether under full-load or idling.

Control of engine speed is established for two reasons: the first to prevent destruction of the engine from racing at speeds away above normal; the second to keep speed of the truck within certain bounds. Seemingly, these reasons are much alike, but actually they differ greatly in purpose and in results. In fact, many fleet operators who use governors to hold engine speeds below the danger point when trucks are running in low or intermediate gears are opposed to governing vehicle speed. They are for or against governors according to the sort of control exercised by the governor.

● Spare the Engine ●
ALTHOUGH controlling speed of an engine obviously controls speed of the vehicle while running in high gear, the distinction between the two types of control is no hair-splitting technicality. In one case we command the governor to say "whoa" when an engine starts to wind up like a 90-in. supercharged racer starting away in first. The speed at which the governor takes charge may be equal to 50 m.p.h. for the vehicle in high. In the other case we set the governor to keep the vehicle speed down to, say, 30 m.p.h. in high.

There is general agreement that racing an engine in low or in neutral

is harmful. When an engine wide open with a light load is shaking the front end of the truck, rattling the hood and vibrating so badly that it "unties the driver's shoe laces," there is little doubt that something should be done to put a stop to the suffering.

But there are other reasons why a governor is desirable under these conditions. Running an engine at excessive speed not only costs a lot of money but it actually reduces the power of the engine.

Present-day truck engines are designed for relatively high speeds and should give excellent service when run within the prescribed limits of load and speed. On the average the peak of the power curve is "flat" and peak torque is carried into high speed.

But there is a point in speed and power production beyond which it does not pay to go. Torque, which is the effective pulling power of an engine, falls off faster than increase in speed. As a result, an engine which might develop 30 hp. at 1500 r.p.m. and just a little more power at 2000 r.p.m., falls off to, perhaps, 20 hp. at 2600 r.p.m. Pushing the speed up 600 r.p.m. above the normal 2000 cuts power down one-half. Meanwhile, the cost of running the engine at 2600 r.p.m. is much greater than at 2000 r.p.m. because bearing loads increase approximately as the square of the speed. If we wind an engine up to 4000 r.p.m., which may happen in low gear work, bearing loads are not twice as much as at 2000 r.p.m., but practically four times as great. That sort of operation simply does not pay and it requires no all-night session to prove it.

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GOVERNOR GOVERN?



AFTER HOURS

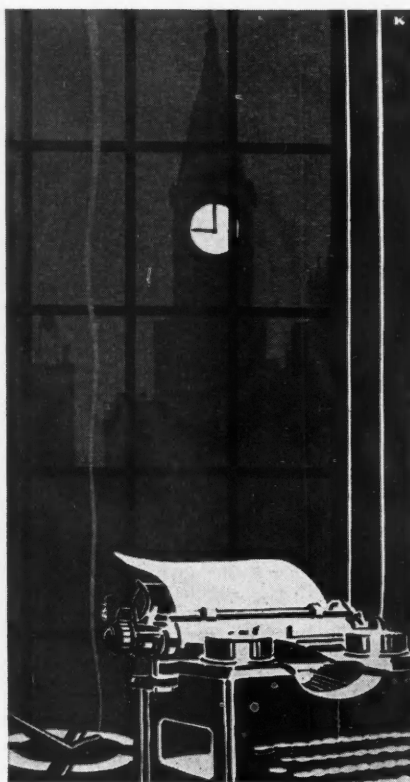
A Few More Words Anent the I.C.C. Hearings With Which Readers Are Familiar (If Not Thoroughly Bored)

If the railroads are as loose in the management of their business as they are loose in their statements concerning taxation and regulation of motor trucks, it's no wonder their earnings and profits are falling off.

The railroads are, so to speak, between the highways and the deep blue waterways, and like any person in such a predicament, they defend themselves with anything that comes to hand. Against the truck, the rubber dagger they use is "generalities." For instance, let us quote a typical railroad defense and attack, this one from the feeble pen of W. L. Ross, president of the Nickel Plate: "There is no denying the loss of revenues to the railroads from the competition of motor coaches and motor trucks. Any transportation company serving the public should pay in taxes what would be equivalent to the use of the roads, and should be regulated as to the operation of its facilities as to size, speed, liability, etc."

That is a typical view of their competition which railroad executives by and large seem to have memorized as if it were an Alma Mater Stein Song. They don't prove that trucks aren't paying enough taxes and they seem to overlook the fact that with few exceptions most states do regulate trucks as to size, speed, etc.

Which simply proves that for want of facts the railroads are content to spout generalities. And there's no prejudice attached to this accusation. Let's quote an editorial from the motor transport section of *Railway Age*, which is but naturally prejudiced in favor of railroads: "The question of taxation of motor vehicles has arisen in a number of instances, railroad witnesses contending that motor coaches and motor trucks are not paying their rightful share of the cost of construction and maintenance of the highways which they use as a place of business. . . . If the railways desire to back up to the limit their contention that motor coach and truck taxes are



inadequate, . . . it is to be hoped that a large number of railways will enter at the forthcoming hearings (I.C.C.) all of the actual evidence which they have that motor coach and truck taxes should be substantially increased. The mere statement of such an opinion is not enough; the opinion should be supported by comprehensive facts and figures."

Well stated, and let us hope the railways heed the suggestion. Even Examiner Flynn of the Interstate Commerce Commission has taken the railroads to task for their conduct. Quoth Mr. Flynn: "The railroads have been making representations to the commission as to their position, but now when they have an opportunity to come and present their evidence and their case in this proceeding, they do not do it in the manner and to the extent which they should. It would be much better if they would present their case before a proper tribunal in a proper form than to

make whining speeches before luncheon clubs."

That's enough to make even a rail baron blush.

When the last I.C.C. hearing has been held, we promise our readers a résumé of testimony. It may not be valuable, but it certainly will be illuminating.

ON this same subject the *Washington Herald* editorializes with commendable discernment: "The railroads, among other 'changes in the law affecting their business,' demand laws 'regulating highway and waterway competition.' It's an interesting demand, but the railroads are mistaken if they think any plan can be put through that would cripple the latest modern transportation methods, in order to support a railway system that has not been kept up-to-date, and is operating, now, under the methods of 1870.

"If canals or highways can carry freight or passengers more cheaply than railroads, the public will demand, and will get, that cheaper transportation.

"Railroad management, which includes many of the country's most intelligent men, should stop weeping and begin thinking and try to use rights of ways in such a manner as to compete intelligently and effectively with transportation on highways impeded by crowded traffic. That ought not to be difficult."

And the editorial winds up by pouring salt on the railroad wounds: "As for heavy freight transportation by canal, railroads will never be able to compete with that, where speed is not important, and even the administration most subservient to railroads' dictation would not dare push it very far."

We have remarked in this page before that with trucks taking the short-haul l.c.l. traffic, waterways the long-distance traffic, and (perhaps in the not distant future) airplanes a lot of the express traffic, the railroads will just have to do some suffering for their shortsightedness.—G. T. H.

INSTANT DELIVERY OF WATKINS BABBITTED CONNECTING RODS



EACH ROD
ACCURATELY
MACHINED
TO MANU-
FACTURER'S
SPECIFICATIONS

PERFECT FIT
GUARANTEED
HAND FITTING
ELIMINATED

WATKINS
Complete BABBITTING
SERVICE

GENUINE FEDERAL-MOGUL BABBITT

All Watkins Rods are babbitted with NEW genuine Federal-Mogul Babbitt—the same babbitt that is used for most original equipment rods.

MACHINED TO CORRECT DIAMETER WITH PROPER OIL CLEARANCE

Every Watkins Rod is machined to correct diameter, with proper oil clearance.

NEW LAMINUM SHIMS

Every Watkins Babbitted Connecting Rod is completely reshimmed—with genuine Laminum Shims.

ORIGINAL MANUFACTURER'S ROD FORGING

Only original manufacturer's rod forgings are used.

NEW NUTS AND BOLTS

Every Watkins Rod is reconditioned with new connecting rod nuts and heat-treated bolts.

REBUSHED FOR PERFECT FIT

Every Watkins Rod is completely rebushed to standard pin size, with a Federal-Mogul Bronze Bushing of proper analysis.

Beginning with the original car manufacturer's rod, every ounce of material that goes into rebuilding that rod is new, of finest quality, and right from the factory of an original equipment manufacturer. This means a great deal to you; it means you can give service to your customer with a product that you know is 100% right.

Watkins service is quickly available everywhere in the United States and Canada through a widespread jobbing organization, backed by twelve completely equipped manufacturing plants, located at 12 strategic points to make swift service available everywhere.

There is a jobber near you, ready to give you over-the-counter service on Watkins rods for every model of every make of automobile, bus, truck, or tractor. Give him your rod business with assurance of complete satisfaction.



FEDERAL-MOGUL CORPORATION

DETROIT, MICHIGAN

OPERATING WATKINS BABBITTING SERVICE

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PEEL YOUR COAT—



GOOD TIMES ARE COMING

Statistics, New Engineering Developments,
Operating Economies and Revitalized Sales
Staffs Reveal That Industry Is Ready for
Action and Set for a Big Victory in 1931

By George T. Hook

ABOUT the toughest assignment a writer can pick for himself at this time of the year is that of looking ahead into the year 1931, attempting to foresee the demise of the well-bewailed business depression and suggesting courses of action. If his readers are level-headed, feet-on-the-ground individuals such as compose the motor truck industry the words he spouts in print will have to contain some degree of substance if he would escape being classed with the negro parson. This parson was delivering a sermon at a church meeting. He was particularly proud of this sermon and he delivered it with the ornate oratory of which only a darky pastor seems capable. While he sermonized, however, he noticed that one of his congregation—Mr. Brown—soon lost interest in what was being said. After the service the parson approached Mr. Brown. "Whassa mattah, Mr. Brown, did'n' yo' lak mah suhmon?" "Nah," answered Mr. Brown, shaking his head disapprovingly. "Why so, Mr. Brown? Didn't Ah argufy and sputify lak the Good Book says?" "Yas, suh, pahson, yo' argufied and sputified," answered Mr. Brown, "but yo' did'n' show wherein."

It's that way with anyone who attempts to write on so ticklish a matter as the 1931 business outlook; he may argufy and sputify to his vocabulary's content, but if he doesn't show his customers wherein, he runs the risk of having them walk out or fall asleep on him.

W • Showing "Wherein" •
ELL, what about 1931? Will it be a better business year than 1930? Who says so? Why? What opportunities does the year hold out for the truck industry? For answers we turn to the recent statements of three well-known commentators on economic matters: Messrs. Babson, Forbes and Ayres. The instruments with which they measure the future are a familiarity with existing conditions and a statistical knowledge of the workings of previous economic disturbances. These gentlemen seem to be unanimous in the opinion that there

are a good many reasons for believing that we have about reached the beginning of the upturn. One reason is that very few depressions have lasted as long as this one has already before beginning to recover. Although the bottom has been longer in coming this time, it may well be that the upturn will be sharper. If that happens, we may expect to get back to normal at about the beginning of the third quarter of next year. Sales in general, however, should gradually increase, beginning next spring. The first quarter of 1931 should be better than the last quarter of 1930 with seasonal adjustment. In the automotive industry it seems reasonable to expect a continuance of the so-called three-year cycle. This would mean that 1931 would be considerably better than 1930, and 1932 still better. We have had business depressions at recurring intervals since before the formation of the Republic. We have had 14, including this one, in the past 50 years. Of these, eight, including this one, have been major depressions and international in scope. Business has recovered from every one of these former depressions and gone on to new heights of prosperity.

All economic history, you will gather from the statements of these economists, points to the dawn of revival before many months have passed. This means

that 1931 will be a year of wonderful opportunities. As one of them put it: In 1929 we were living in a palace with a powder mine in the cellar. In 1931 we may feel that we are living in a poorhouse but with a gold mine in the cellar.

Assuming—as there is every reason to do—that there is a good deal of truth in what the economists say, how should the truck industry take advantage of the truth? Let's look into the matter.

• New Leaders •
FIRST of all, let it be said that out of the business depression will emerge new leaders—in the truck industry as well as in all other lines of business. The leaders will be those who are quickest to take advantage of all opportunities. Consider the truck trade, on whose success depends the success of truck makers. Where lie its opportunities in 1931?

With the beginning of 1931, it is estimated that there will be approximately 15 per cent fewer automotive dealers than at the beginning of 1930. This 15 per cent represents, unquestionably, just so much chaff—dealers who conducted their businesses loosely and were prospects for the mortality graveyard even before the depression came along. These dealers number among them all of the well-known types who mismanaged their affairs in the several ways that are open to dealers. With the 15 per centers out of the running the race is left to the 85 per centers. Of course they have suffered, too, but having conducted their affairs better they are perhaps frothing a bit at the mouth but still able to jog along. What they need is a second breath. And they ought to take it right now. Toward the end of 1930 many

dealers cut slices out of their overhead by reducing sales staffs. This action placed a lot of good salesmen and sales executives on the unattached list. In beginning the 1931 sales offensive one of the first tasks of any smart dealer might well be the selection of good men from this available manpower. Here is the dealer's first opportunity on the road to leadership.

With a revitalized sales staff and sales management, the next opportunity is in starting to work on prospective buyers in advance of the spring upturn of business and the fall return to normalcy. Of course, the dealer who isn't working on prospects all the time isn't worthy of the designation. But to get the best results in 1931 means that this customary practice must be intensified. If a prospect is at all disposed to listen, he can just as well be sold on the relative merits of a particular truck now as later. Now is the time to size up the prospect's business and its transportation needs and to make recommendations. This is routine and ought to be covered early, so that when the prospect is ready to sign checks, the salesman's major effort can be devoted to recapitulating high lights and putting the finishing touches to the deal. Now is the time to help make up the minds of all those prospects who are just waiting for conditions to improve. There are thousands of them.

There's nothing unusual about working along these lines. Dealers galore are this moment planning these very things, which are mentioned here merely to emphasize their importance. Furthermore, intensified selling effort will open up profit-making opportunities. In the heat of competition it frequently happens that someone gets blistered. To be exact, it's the over-anxious dealer who over-allows. The overpowering desire to get an order at the expense of a competitor generally means that it is gotten at the expense of profit. Truck transportation today is as much of a necessity in business as merchandise, and the dealer who gives it away and dangles his legitimate profit as the bait is inviting—as has always been the case—the wolf and leaving his front door open. If there is one opportunity that should be fully real-

ized in 1931 it is that of making a satisfactory profit on every deal.

Will the manufacturers of trucks do anything to stimulate buyer interest in order to make the dealer's job easier? The answer is that truck makers fully realize their responsibility. Laboratories never were busier and refinements in design may be expected. Innovations are just as certain. Among these may be mentioned downdraft carburetion, more eight-cylinder engines, six-wheelers of moderate carrying capacity such as the 3-tonner Federal recently came out with, more power braking (air and vacuum, particularly air), and probably free-wheeling. There is evidence also that some factories may answer the demand for more power and higher speeds by slipping twin engines under the hood. Twin sixes and twin eights are not at all unlikely. The twin eight, in fact, is already being pioneered by Relay, as a glance at page 38 of this issue will prove.

● Twin Fours? ●

EVEN a twin four may rear its L-heads. This interesting speculation is tied up with the name of Ford. The boys who stay awake nights figuring out what Ford should or may do are convinced that a V-eight Ford has been born already. The speculators see this eight as forming the base of a new supplementary Ford passenger car, priced slightly higher, of course, than the Model A and much lower (of course, of course, of course) than the Lincoln. Our interest in this V-eight would be no more than lukewarm if we were not possessed of the knowledge that Ford is contemplating the introduction of a six-wheel truck of 3-ton capacity. We had fairly authoritative information concerning this development before the V-eight. And you can ask yourself the same question we asked ourselves at that time: "Is it likely that Ford would try to get away with his present four-cylinder engine of a 3-ton six-wheeler?" If you answer it the way we answered it you'll put some stock in Ford V-eight rumors.

Now if Ford should bring out a 3-ton six-wheeler with a V-eight engine, what would Chevrolet do? Or

you might ask yourself: "What is Chevrolet this very minute planning to do?" Doubtless, something will be done, but what it will be, deponent knoweth not.

Probably every truck company will stress appearances in its 1931 models. Beauty in trucks is being sold along the same lines that Flo Ziegfeld, Earl Carroll and George White purvey pulchritude on the stage: the customers like it, want it, and are willing to pay for it. Trucks must be good-looking nowadays or the sales resistance will measure somewhere around 50,000 megohms, which is a lot of ohms.

Another interesting development which may gain considerable headway in the next 12 months, and which would add to the opportunities, is the encroaching by both the so-called heavy-duty and light-duty truck manufacturers upon each other's preserves. This would be accomplished by an extension of truck lines and prices. In effect, Ford would do this very thing if he came out with a six-wheel 3-ton job. For some time now the other light-duty makers have been poaching on the heavy-duty reservation. Retaliation has been quite a time in coming, but it's here. Sterling committed the first heresy in the heavy-duty ranks by casting off the bonds of tradition and engineering a line of light-duty, good-looking trucks competitively priced. Detailed announcements will be made shortly. Prices have not been made public, but we have reason to believe they will begin at \$795. We've seen color drawings of a few models. They'll make an attractive dealer proposition.

Will such traditional heavy-duty monarchs as White and Mack follow Moses Sterling into the Promised Land? The prospects, while not exactly bright, are by no means dull. Mack has flirted with the idea before. Mack wooed Reo a couple of years back, but the wedding fell through because Reo refused to divorce the truck business from the passenger car business. White has done no ogling but has doubtless done a lot of thinking. Stepping into the light-truck, right-price field is a weighty matter. With White or Mack it means the expenditure of millions. It would cost them plenty to expand. And it may cost them plenty not to expand. Deep and sound thinking and foresight are necessary. Look for something to happen before the year is up.

Consolidations of truck companies are also in prospect and should strengthen the interests of the concerns involved. Out on the West Coast, Moreland, Kenworth, Fageol and Kleiber are reported to be in confer-

TURN TO PAGE 60, PLEASE

PEEL YOUR COAT— GOOD TIMES ARE COMING

LYCOMING SPLITS 130 HP. EIGHT WAYS

Models AEC and AED, $3\frac{3}{4} \times 4\frac{3}{4}$ in.,
Are Latest L-Head Type Truck Eights

Lycoming AEC and AED Eights

Model	AE
Type	L-head
Size	$8-3\frac{3}{4} \times 4\frac{3}{4}$
Displacement	420 cu. in.
Hp. at 2800 r.p.m.	130
Max. torque at 1200 r.p.m.	305 lb.-ft.
No. of main bearings	5
Size of Journal	$2\frac{5}{8}$ in.
Length, front Journal	2 in.
second Journal	$2\frac{1}{8}$ in.
third Journal	$2\frac{5}{8}$ in.
fourth Journal	$2\frac{1}{8}$ in.
fifth Journal	$2\frac{3}{4}$ in.
Block material	chromium iron
Connecting-rod bearings:	
diameter and length	2 11/32-1 11/16
type	not removable
length C to C	9 in.
Valves, material, inlet	chrome nickel
material, exhaust	silchrome
size, inlet	$1\frac{3}{4}$ in.
size, exhaust	$1\frac{1}{8}$ in.
lift	11/32 in.
Camshaft:	
No. of bearings	6
diameter, front	2.16 in.
rear	2.07 in.
length, front	2 in.
intermediate	1 in.
last	1 11/16 in.
drive	4-gear
width of gear	$1\frac{1}{2}$ in.
Piston material	cast-iron
Rings, oil	2
compression	2
Pin lock in	rod
Suspension	3-point
Lubrication	pressure

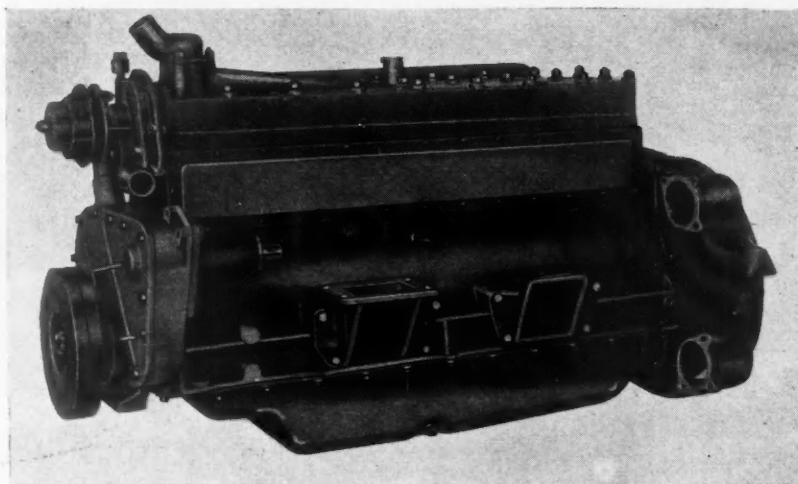
LYCOMING has entered the commercial field with two straight eights designed especially for trucks and buses. These new commercial eights are known as the AE series, AEC and AED. Both are identical in construction with the exception that the AED model has provision for a 6-ft. Westinghouse air compressor. When the air compressor is used on the AED, the generator is driven through the air compressor.

The AE series is an eight-in-line, L-head type engine. The bore and stroke is $3\frac{3}{4} \times 4\frac{3}{4}$ in. respectively, giving a displacement of 420 cu. in. At 2800 r.p.m., the recommended governed speed, it develops 130 hp. Torque is 305 lb.-ft. at 1200 r.p.m.

Cylinder block and crankcase are cast integral. In order to increase the strength of the crankcase, a longitudinal rib running the full length of the crankcase is cast about 3 in. above the oil-pan flange. The exhaust manifold is equipped with a heater valve which can be opened and closed to vary the amount of exhaust gases passing around the intake riser. Normally, the exhaust gases from cylinders Nos. 4 and 5 are in contact with the intake riser, but when the heater valve is entirely closed, the exhaust from five cylinders is forced around the riser. With the heater valve entirely closed, the warming-up period is considerably reduced. The intake manifold is provided with a flange for a 2-in. single carburetor. The flywheel housing is of one piece and is detachable.

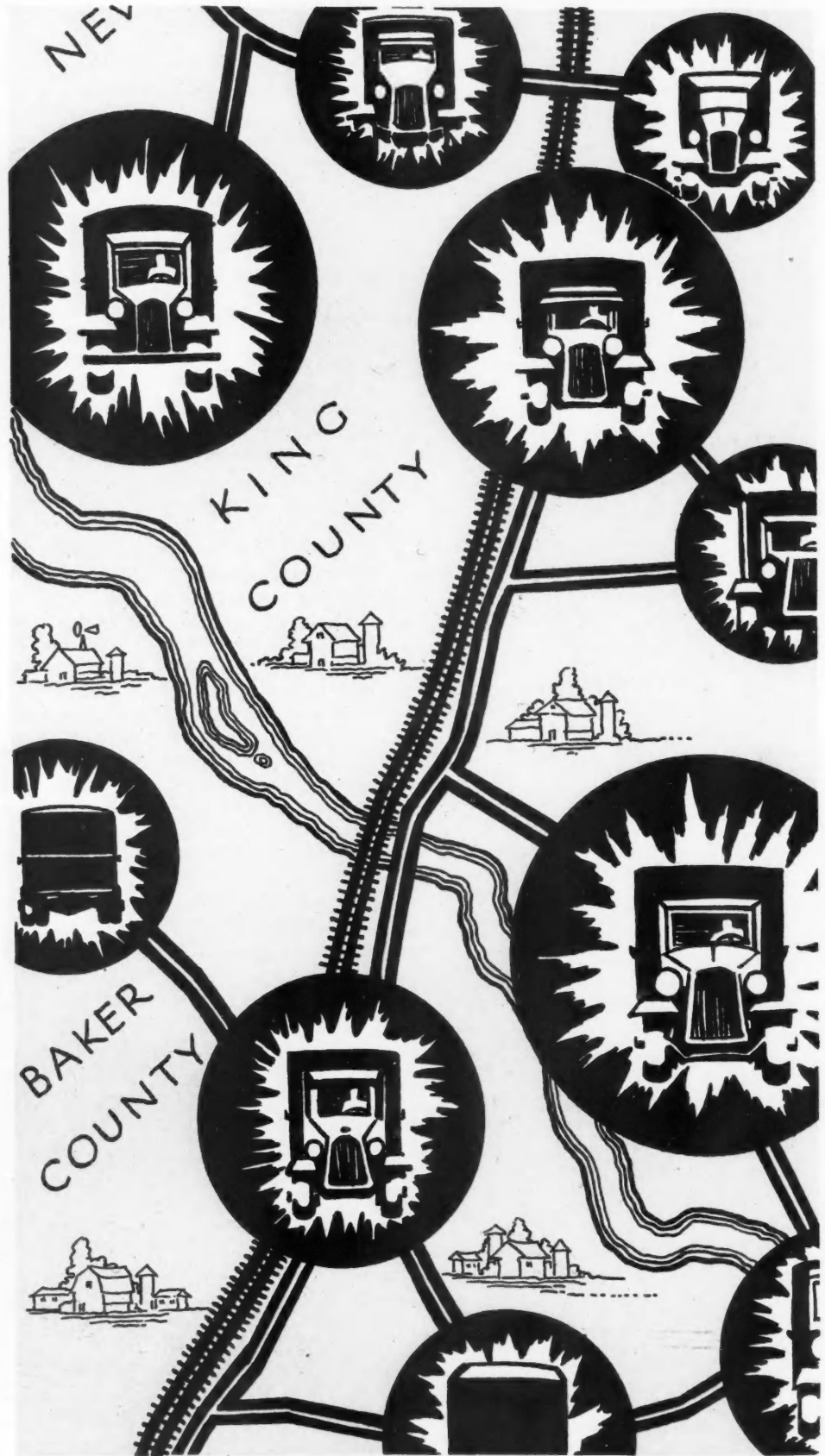
The crankshaft revolves in five bronze-backed babbitt-lined

TURN TO PAGE 60, PLEASE



Lycoming AE
Eights are similar
except that AED
has provision for
an air compressor

FARMERS'LL CRASH AND



THIS IS THE
THIRD IN A SERIES
OF STUDIES BY



BRYCE EDWARDS

Marketing Specialist,
U. S. Department of
Agriculture, Bureau
Agricultural Economics.

CARRY MORE MARKETS

Motor Transport of Farm Products is Progressing Beyond Hen-Like Scratching of Consuming Areas and as Hundreds of Undeveloped Territories Swing Into the Trend of the Times Truck Transports Will Run Into Staggering Figures

FACTS are the parents of knowledge, knowledge begets judgment, and wisdom is the child of judgment and knowledge—so goes an old Chinese axiom.

The facts about trends of truck transportation is what we're trying to present here. Rapid increase in motor transport has been accomplished in some lines, little in others; some regions have progressed far, and others little or not at all. Knowledge is needed as to progress by regions and commodities so as better to judge the future.

About twelve years ago some few enterprisers began long-distance transportation by truck. Each year since has witnessed an extension of this evolution to new regions and the radius of trucking has widened yearly. Distances and volume of these truck shipments have become great in some regions, while in others a start has hardly been made. We shall examine this problem by commodities in several representative regions.

● Livestock ●
FAIRLY complete figures for the more important livestock markets over many years permit comparisons which show the remarkable increase in shipping livestock by truck in recent years.

The increase in "trucked-ins," including a small amount of "drive-ins," has been out of all proportion to the increase in the numbers marketed, amounting in various kinds of livestock from 600 to 900 fold gain between 1917 and 1929.

In 1929 the total number of meat animals trucked to 16 important livestock markets was nearly 14,000,000 head, or 21.9 per cent of the animals received. The annual percentage of "trucked-ins" for cattle, calves, hogs and sheep combined at the 16 leading markets were as follows: 1918, 3.14 per cent; 1919, 4.10 per cent; 1920, 5.21 per cent; 1921, 5.85 per cent; 1922, 6.74 per cent; 1923, 6.85 per cent; 1924, 7.17 per cent; 1925, 8.60 per cent; 1926, 10.72

per cent; 1927, 13.49 per cent; 1928, 18.05 per cent; 1929, 21.85 per cent.

It will be seen from these figures that the movement gained momentum as time passed until the increase in the last four years exceeded the previous nine years.

● Fruits and Vegetables ●

FOR clarity of discussion, short hauls are defined as less than 20 miles and long distance as more than 75 miles. From 20 to 75 miles distance is termed the intermediate district.

In western New York motor truck shipments of fruits and vegetables developed in the intermediate districts since 1918 with the greatest gain from 1924 to 1928. Long-distance trucking of more than 75 miles developed largely after 1924, with the greatest extension in volume and distance in 1929 and 1930. Progressive increase in long-distance trucking of lettuce, celery, peas, early cabbage and tomatoes occurred in each of the years 1928 to 1930. Lettuce was trucked as far as Baltimore, peas as far as Boston and tomatoes to Pittsburgh.

Growers and members of the trade in western New York were asked to estimate the annual increase in the trucking of fruits and vegetables, and their future intentions. The average increase from 1925 to 1928 inclusive was estimated at 150 per cent. In some communities such shipments doubled each year. In others the increase proceeded at a slower pace. From 1928 to 1929 the average estimated increase was 17 per cent.

In 12 counties the intentions of the trade indicated little change in the future (that is, the movement was more or less stabilized), an upward trend was foreseen in eight counties, and two counties predicted a downward trend. The latter two were Allegany and Steuben counties, where long-distance trucking of potatoes to Buffalo, Rochester and Pittsburgh reached a peak in 1927 and has declined since. Many members of the trade believe the trucking of potatoes beyond the intermediate area

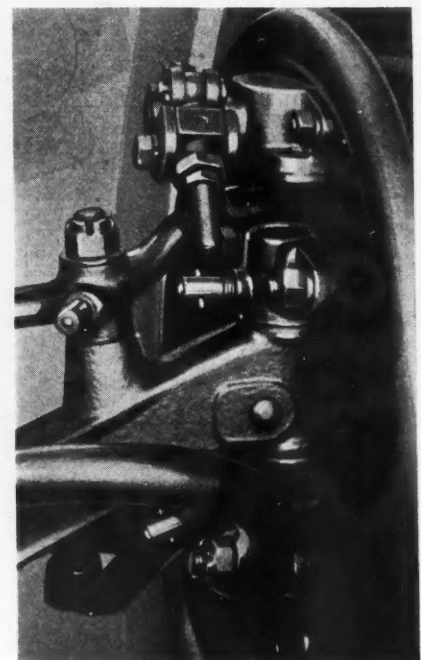
TURN TO PAGE 50, PLEASE

THE AGONY CORNER



SERVICE TROUBLES SOLVED THIS MONTH

1. Spindle Bolts Break
2. No Oil Gage Pressure
3. Ford AA Brakes
4. Gear Shifts Itself



Chevrolet axle load

I. SPINDLE BOLTS BREAK

Continued breaking of spindle body bolts on an overloaded Chevrolet 1½-ton truck is reported by a shop in Chicago. Three months ago when bolts were removed for rebushing, "both of them were broken in half." They were replaced and new bushings installed. Two months ago the bolts were broken in half again. New bolts were again installed and the bushings were reamed by machine. Although the truck has made but a few trips since that time the bolts still keep up their habit of dividing into two parts.

● Breakage of spindle body bolts fortunately is a rare occurrence. Bolts and bushings wear, but

seldom break. If bolts and bushings are badly worn and a truck is driven over a rough road, the consequent hammering action may cause a break. But breaks persist in this case in spite of repeated replacement and careful fitting of bolts and bushings.

With a known overload on this truck and the fact that bolts continue to break, the most likely cause of the trouble is lack of camber. If the front wheels are straight up and down or, possibly, closer together at the top than at the bottom, an extra strain is thrown upon the steering knuckles, wheel bearings and spindle body bolts.

FOR SERVICE MEN

The services of this department, conducted by an expert in truck mechanics, are available to all readers without cost. Send your maintenance problems to The Agony Corner. The solutions will be mailed or telegraphed

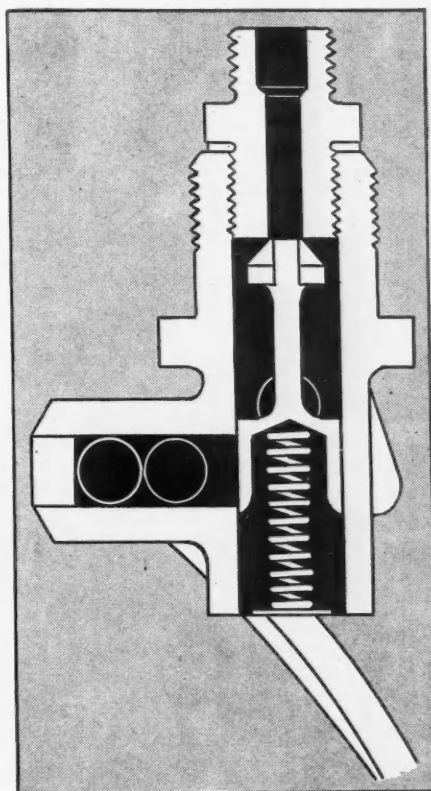
2. NO OIL GAGE PRESSURE

An engine in a 1926 Chevrolet truck registers no pressure at gage, although oil flows freely to connecting rods and main bearings, according to a shop in Montana. The shop installed a new pump, new gage and new valve between gage and pump. Change of oil does not affect the pressure. All oil lines were removed and cleaned and pipes do not leak.

● The oil distributor valve used in early Series V engines contains a valve which is pushed upward by a spring. Upper end of the valve is notched to allow oil to flow upward through the fitting and tubing to the gage. Downward pressure of oil

forces the valve down until the lower skirt uncovers a by-pass leading to oil pipes extending to oil troughs.

With this construction, pressure should show in the gage if oil enters the distributor valve. As oil is flowing to bearings, it is evident that there is a stoppage between the oil pump pipe in the distributor and the oil pressure gage. The most likely place is the notch in the valve or the fitting screwed into the top of the distributor. A final check can be made easily by disconnecting the lead to the oil gage at the lower end while the engine is running and noting whether or not oil comes out.



Oil distributor

3. FORD AA BRAKES

A garage in New York State, using a 1928 Ford AA truck to haul gasoline from bulk storage to dispensing pumps, cannot make the brakes hold good, although mechanics have tried all sorts of adjustments.

This truck embodies the four-brake system in which both pedal and hand lever apply the same four brakes. There are no separate hand brakes as on present production of Ford AA trucks.

● Brakes on Ford AA trucks are adjusted at the wheels and not on brake pull-rods. Both adjustable and non-adjustable pull-rods have been employed. Sometimes the factory setting of pull-rods is changed, with the result that levers are pulled into positions where they are not fully effective. The first step in checking brakes for this trouble, therefore, is examination of chassis brake linkage. Each of the brake levers is disconnected from its pull-rod. With the lever moved just a bit toward operating position to take up the "slack" in the cam and the hand lever and brake pedal in off position the clevis at the end of the pull-rod should be in line with the lever.

Brake shoes carrying semi-molded lining are available for this model truck. This may be more effective, under conditions existing in this operation, than the lining originally used in 1928. No braking system is effective with drums in poor condition. New drums can be purchased on an exchange basis for a moderate sum.

4. GEAR SHIFTS ITSELF

A lot is being said about automatic transmissions, but a shop in New Mexico ran across a "self-shifting" transmission that is neither new nor desirable. The unit, which is incorporated in a 1929 Whippet 6 truck, slips into low speed whenever the shifting lever is placed in reverse.

The shop did a thorough job of trying to overcome the trouble. New shifter forks, sliding gear shaft, low and combination gear, new second and high sliding gear were installed. Bearings were inspected and found okay; spring on shifter shaft was tightened to the limit. But the transmission still jumped from reverse to low gear.

● The trouble probably is due to the reverse idler gear being out of line because the idler gear shaft is bent or worn or the gear badly worn. If the shaft is worn, the gear teeth will be out of line with the mating gear when under load. Another possibility is that the shifter fork is bent so that the reverse idler gear does not mesh fully when gear lever is moved to reverse position. This would cause the reverse idler to move toward neutral, due to chamfer on edges of gear teeth.



COMEBACKS mentioned in this story have nothing to do with the future plans of Jack Dempsey, the forthcoming revival of business or the latest wise-cracks. Comebacks, as we shall use the term, means the return of a customer to a service shop because a repair job does not suit him.

Such a comeback is a total loss to any shop. At best, it represents a loss of parts or labor, or both, required to make good on a job which was not done right in the first place, does not perform as the customer wished or did not bring about the result which he expected. At

its worst a comeback—and the worst kind of a comeback is a calamity—leads to argument, misunderstanding and loss of good will. Unfortunately, loss on comebacks in some cases greatly exceeds the price of the original job.

Knowing the evil consequences of comebacks, shop foremen and service managers go to a lot of trouble to make sure that all jobs leaving their shops are carefully checked and inspected. For illustration, in many large shops, mechanics are required to stop work and call a floor inspector at certain stages in repair jobs. In both large and small shops, the men in charge constantly supervise all repair work going through the establishment. In general, their efforts are successful and they are able to keep comebacks

TEST BENCHES KNOCK OUT THE COMEBACKS

Electrical Units Don't Puzzle
Mechanics Who Check Every
Job Before and After Repairs

By JAMES W. COTTRELL

down to a very small percentage of repair orders.

Because electricity is an elusive, intangible thing, there are chances for slip-ups in service on electrical equipment on trucks, which do not exist in the field of mechanical repairs. A break in a wire inside the insulation may carry current for a long time and then suddenly part, causing an open circuit. A minute defect in insulation may give trouble only when a certain temperature is reached or when moisture penetrates into the assembly. The most painstaking and careful mechanic cannot be sure of the condition of starting, generating and ignition equipment without making positive tests on the various component parts.

A short time ago, I had the pleasure of inspecting a very well-equipped shop specializing in electrical service. It is the official service station for several makes of starting, lighting and ignition equipment in a medium-sized city. The proprietor, who is proud of his shop and the quality of work which it turns out, spent some two hours showing me the equipment and the manner of handling work. He goes so far as to use laboratory type meters and gages to test instruments on his test equipment. At the completion of the trip through his shop, I remarked that the percentage of comebacks was probably very low.

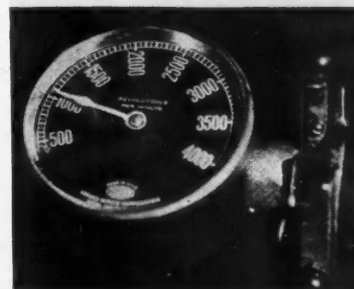
"You are right. I am very proud to say that our percentage of comebacks, whether the complaint is justified or not, is only 5 per cent."

Only 5 per cent of comebacks from a shop possessing an unusually complete assortment of testing equipment! That raised the question, what the percentage might be in shops not so well equipped or in shops without electrical test equipment.

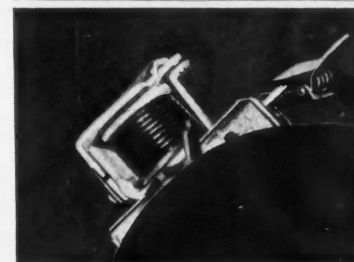
The answer is "plenty." One dealer's service man,

Testing Generators

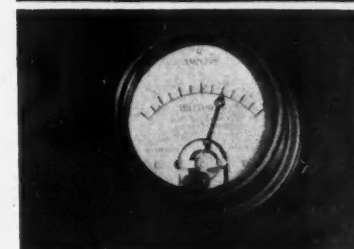
When speed is
1200 r.p.m.—



Relay contacts
should close—



And charging rate
be 11 amp.

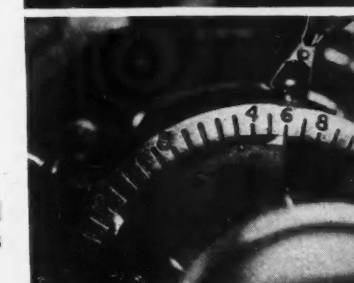


Synchronizing Ignition

With distributor
at full speed—



Both sparks should
come opposite lines
numbered "6."



TEST BENCHES KNOCK OUT THE COMEBACKS

Four More Tests

who had just installed a test bench, said that electrical service was the most troublesome department of the shop until he got the test bench. A fleet superintendent related that comebacks on electrical repairs cost him a lot of money each year because his fleet was scattered over a large area. After he installed electrical testing equipment, the comebacks on this type of work practically ceased.

Test benches now on the market provide, in a compact assembly, means of testing generators, starters and ignition units. With a storage battery to provide electric current and an electric motor to supply power, these test benches put electrical units through their paces and show whether or not they are performing as they should. Voltmeters and ammeters show how much current is being supplied or used and also whether or not current is flowing through coils, wires and connections.

Typical tests of generators, ignition units and starters are shown in the accompanying illustrations. Basic tests on a generator are the charging rate, the speed at which the relay closes and, of course, its general condition. The generator is mounted in the bench, attached to the motor, and connected to leads from the battery and ammeter.

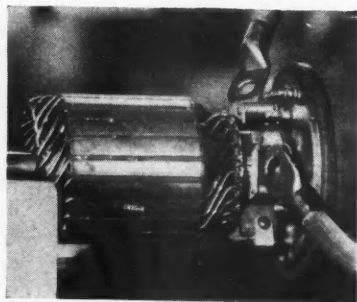
The test is shown in illustrations 1, 2 and 3, under the heading "Testing Generators." Generator speed is brought up to the required point, the relay closes and the ammeter indicates whether or not output is up to standard.

Synchronizing double-breaker point ignition units is a job which has caused many mechanics uneasiness. The points can be tested in place on the engine, but if the unit is to be removed for other work, it is very easy to include the synchronizing test. Action of the breaker points individually and number of degrees of travel between sparks on the two pair of points are checked by a scale and revolving

Testing Starters

When starter cables touch brushes—

Ammeter should show discharge.

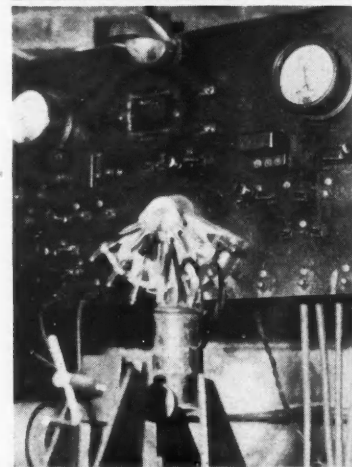
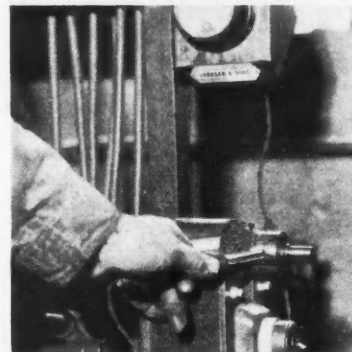
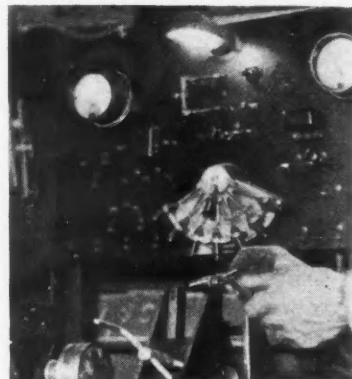


Condensers should not conduct current.

Test points reveal open circuits in generator armatures.

Ignition coil should show good flash at gap with—

Voltage at 6.



pointer. The illustrations Nos. 4 and 5, under the heading "Synchronizing Ignition," show this action test. The distributor is driven at a fairly high rate of speed and the scale is moved around so that one spark coincides with one point, "No. 6" in this case. The other spark should take place opposite the other line No. 6. The illustration shows how closely the points are synchronized.

Armature windings of starters are checked by supplying current to the brushes and noting on the ammeter whether or not current is flowing. The brush holder, shown in illustration 7, under the

TURN TO PAGE 60, PLEASE

FEDERAL'S DEAD AXLE SIX-WHEELER FIRST IN ITS FIELD

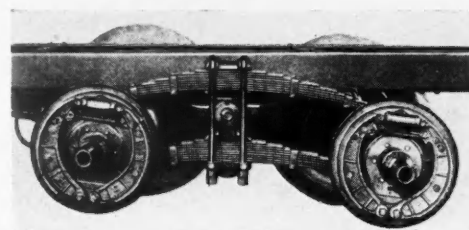
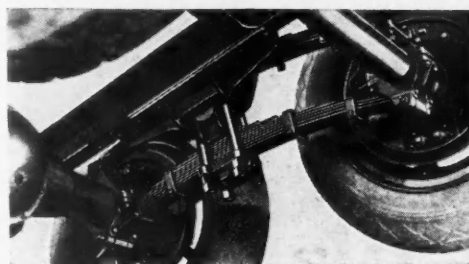
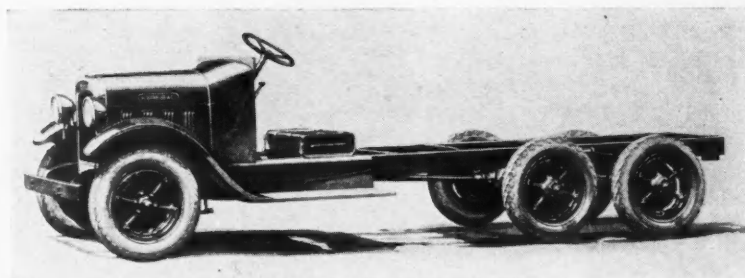
Rated at $2\frac{1}{2}$ to 3 Tons
Model DSW is Powered
With a "Four" or "Six"

Specifications of Federal DSW Six-Wheeler

Model	DSW
Price, 4-cyl. model:	
140 $\frac{1}{4}$ -in. size	\$1,050
164 $\frac{1}{4}$ -in. size	1,120
6-cyl. model:	
144 $\frac{3}{4}$ -in. size	1,307
168 $\frac{3}{4}$ -in. size	1,392
Transmission speeds	4
Rear axle, type	full-floating
drive	bevel
ratio, standard	6 $\frac{3}{8}$ to 1
ratio, optional	5 $\frac{2}{5}$ to 1
Frame size	6 x 2 $\frac{3}{4}$ x $\frac{1}{4}$ in.
Tires, front	6.00/20
rear	32 x 6

A NEW six-wheel, two-wheel-drive truck of from $2\frac{1}{2}$ to 3 tons capacity and of unusually low frame height has been added to the line of the Federal Motor Truck Co., Detroit. This new unit, designated as Model DSW, is available with either a four-cylinder, 48-hp. engine or a 60-hp. six, each in two frame lengths.

While only the forward of the two rear axles is alive, both axles are mounted in a unit through two pairs of parallel inverted semi-elliptic springs, trunnion-mounted on the frame. Drive and torque of the front axle are taken through these springs, and axle twist due to road irregularities is avoided by the method of attaching the springs to the axles. The method employed is unique. Both axles are fitted with brackets, rigidly attached, to which the spring ends are secured. The ends of the lower springs are attached to the brackets by bolts similar to those employed in assembling front ends of front springs in a conventional truck. The front end of the



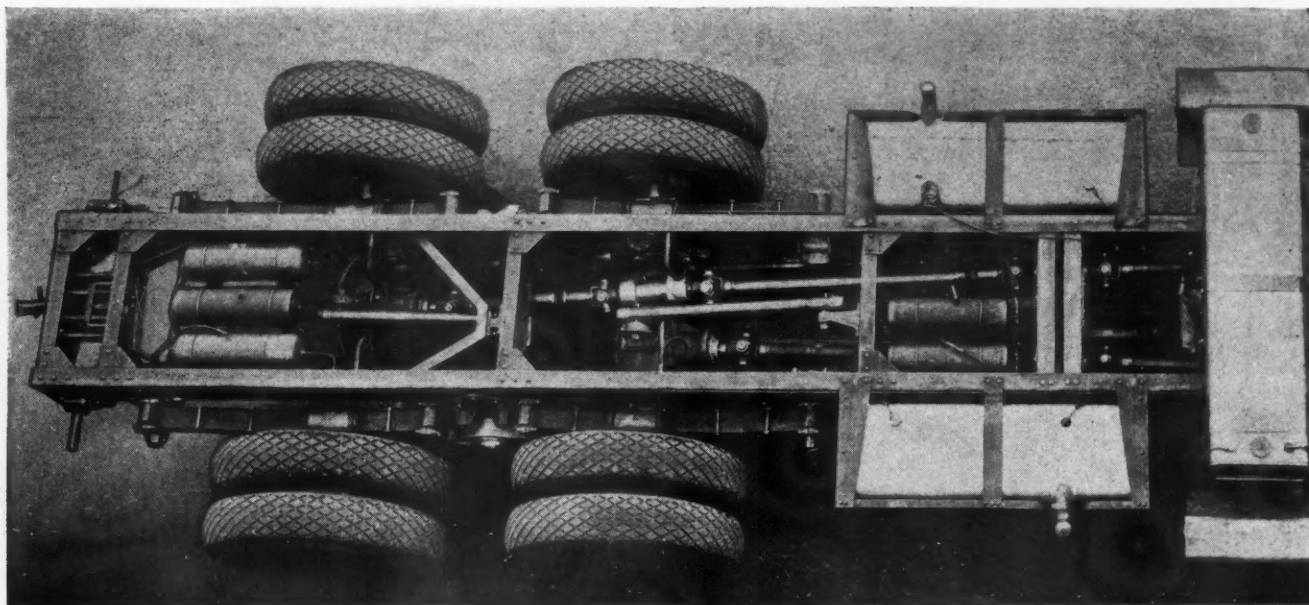
The center axle of Federal's $2\frac{1}{2}$ to 3-ton six-wheeler is mounted in a unit with the rear live axle through two pairs of parallel inverted semi-elliptic springs trunnioned to frame

upper right spring and the rear end of the upper left spring are attached in the same manner. The two remaining upper spring ends are shackled to the brackets. By shackling one end of one of the two springs at each side, each end of each axle can rise or drop with road irregularities without twisting the axles.

The parallel springs are held together by U-bolts with trunnion blocks between, about which the entire rear axle unit oscillates. These shafts rotate in large bearings located in frame brackets that in turn are attached to the under side of the frame side rails. These brackets have long top and bottom flanges which also act as frame-reinforcing members. The shafts themselves are said to be of patented Federal design and incorporate oil reservoirs which through wick members supply the trunnion-shaft bearings with oil. Oiling connections for replenishing the reservoir are located on top of the spring.

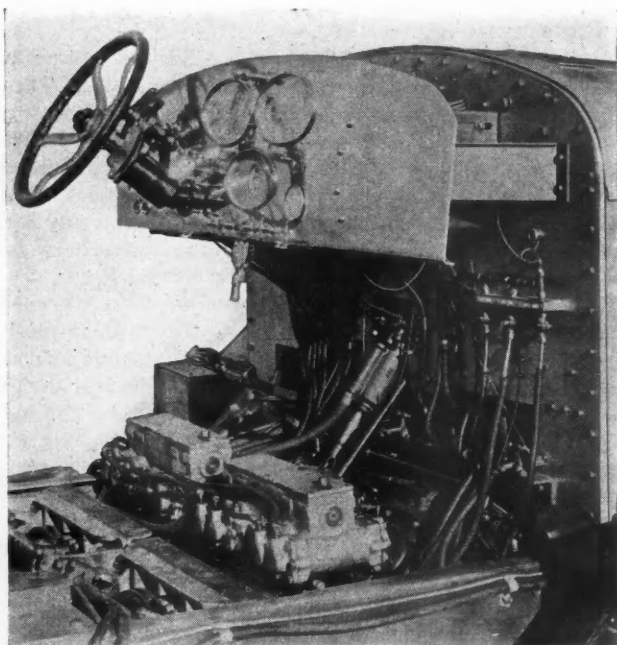
An increase in tractive effort for the driving member of the six-wheel unit is obtained by offsetting the springs relative to the trunnion pin in the frame-supporting bracket, thus throwing additional tractive load on the front wheels of the unit. Further claims for the Federal design include less unsprung weight by taking torque and propulsion through the springs, increased ground clearance for the axles by installing the lower pair of springs close to the trunnion points, and greater steering ease, due to more stable operative action of the axles. Special propeller shafts permitting a maximum deflection of 30 deg. are provided.

All six wheels of the new Federal $2\frac{1}{2}$ to 3-ton truck are provided with brakes having 15-in. diameter, 2-in. wide drums, brakes, of course, being hydraulically operated. An 8 x 2 $\frac{1}{2}$ -in. drum on the propeller shaft provides the emergency brake.



RELAY PIONEERS DUO-

Two Eight-Cylinder Engines,
Totaling 275 Hp., Drive Two
Rear Axles Through Two
Separate Lines of Transmission



January, 1931

RELAY MOTORS CORP., Lima, Ohio, pioneer the field of two-engine heavy-duty trucks in presenting their new Model 300A as the most powerful truck on the market. This new unit, which is offered either as truck or tractor, is designed to carry heavy loads and/or pull one or more trailers. The truck embodies two propelling units, each of which includes an engine, transmission, propeller shaft and rear axle. Either one of the eight-cylinder engines may be cut out of action when load and road conditions permit operation with half power.

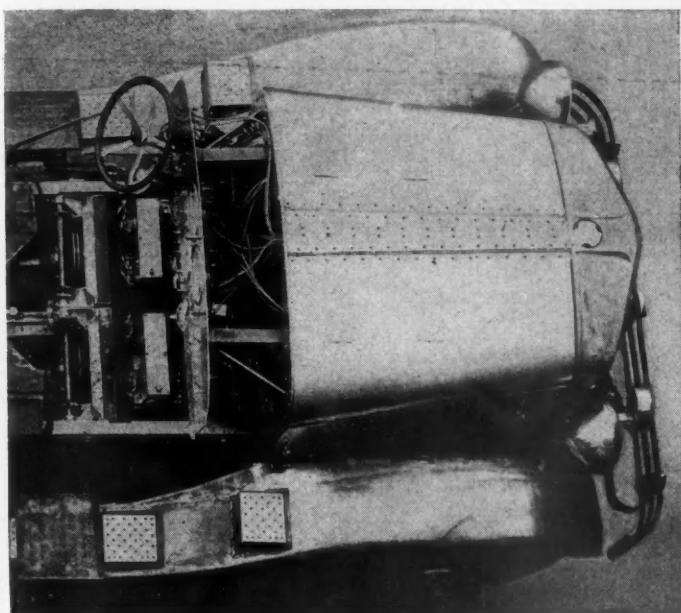
This Relay job is the first in production of several which have been mentioned in rumors that manufacturers were developing large trucks driven by twin engines. The idea represents one solution of a problem arising out of modern motor truck transportation.

The obvious economy of hauling freight in large unit loads has inspired truck owners and manufacturers to raise carrying capacities to the limit permitted by legislation and operating conditions. A demand that these huge loads shall be carried at high speed accompanies this development, a marked contrast with conditions a few years ago when the saying was, "The bigger, the slower."

Engineers embark upon no vacation when they set out to design machinery to develop and transmit the power required to highball 10 or 15, or even 20 tons, over the highways. Making engine cylinders larger and larger presents difficulties; transmitting 100 or

Gear shifting of both transmissions together or either one separately is accomplished by separate air controls of the Universal Gear Shift Corp. pattern

The Commercial Car Journal



Specifications of Relay Duo-Drive

Engines, No.	2	Steering	Hydraulic
Make	Lycoming		
Model	AEC		
Cylinders, No.	8	Rear Axles, No.	2
Size	3 3/4 x 4 3/4	Make	Relay
		Type	Pendulum
Clutches, No.	2		
Make	Jones	Springs	
Type	Twin Disk	Front	50 x 3 1/2
Operation	Hyd.	Rear, number	4
		size	54 x 4
Transmissions, No.	2	Brakes	
Make	Fuller	Service	6-wheel
Model	VUOG	Operation	Air
Speeds	5 forward 2 reverse	Type	Westinghouse
Direct in	4th		
Control	Air		

DRIVE SIX-WHEELER

Large size does not prevent the new Relay from presenting an attractive appearance. The coupe cab, matching the hood, provides seats for two in addition to the driver and a single sleeping berth



200 hp. is no small engineering feat.

One way of overcoming a big job is to divide it into a number of small tasks. In the Relay a total of 270 hp. is generated by no less than 16 cylinders. The engines are described on page 29. The drive line stresses are kept within ordinary bounds by using two engines, each driving a separate axle, with no power connection between axles.

Power control is applied to practically all the functions of the vehicle. In fact, in ordinary operation the only control which the driver works directly is the accelerator. Steering is by hydraulic pressure, effected by a Vickers booster, clutches on both engines are actuated simultaneously by a hydraulic cylinder, gears are shifted by compressed air and even the job of applying two hand brakes is lightened by use of a vacuum booster.

The large photograph, reproduced above, shows the general layout of the chassis and many details of construction which require no further description. The two engines are mounted side by side in the frame, which is built up in front to accommodate the dual powerplants. Each engine is complete in itself, incorporating not only the accessories for its own operation but, in addition, the oil pump and air compressor required for power controls.

Rear axles of the well-known Relay pendulum drive type have offset differential housings and are identical. One is mounted upside down to accommodate displacement of propeller shafts

from the usual center line. Each axle is equipped with both radius rods and a torque rod. Two semi-elliptic rear springs are used on each side of the frame.

Three gasoline tanks with a total capacity of 150 gal. are carried. Two are placed, one on each side, just outside the frame and the third under the driver's compartment.

The frame, which has conventional width of 34 in. from rear to cab, embodies side rails 10 in. deep, with flanges 3 1/2 in. wide, of 3/8-in. stock. It is reinforced by 18-in. fish plates.

Equipment comprises a complete set of instruments for each engine including tachometers and viscometers, in addition to the usual instruments for the vehicle. Mogul model Cleco Gruss Air Springs are included in present equipment. Radiator and front bumper also are supplied.



THE TRUCK INDUSTRY— FIGURATIVELY SPEAKING

DOMESTIC sales in October, according to the statistics below, dropped 31 per cent under the total for the corresponding month of 1929. Complete returns for November show no betterment, sales dropping close to the low point of the year when the percentage figure dipped to 37 per cent in August. Sales for November totaled 22,012, as against 33,634 for November, 1929, a drop of almost 35 per cent. Production in No-

vember improved over October from a percentage standpoint, dropping only 34 per cent, as compared with the same month of last year. With an estimated production of 32,000 for December, production for the year is estimated at 564,487, which is approximately 32 per cent below the 1929 total. Exports continue low, November being 50 per cent short of the total units shipped out of the country in November, 1929.

Domestic New Truck Registrations by Makes and Months

	Autocar	Brockway-Indiana	Chevrolet	Diamond T	Dodge	Fageol	Fargo	Federal	Ford	G. M. C.	Goffredson	International	LaFrance-Republic	Mack	Moreland	Relay	Reo	Rugby	Schacht	Selden-Hahn	Sterling	Stewart	Studebaker	White	Willys-Overland	Total Sales Including Miscellaneous
January.....1930	160	249	8,754	242	1,608	41	186	169	13,233	727	12	1,835	43	345	51	28	698	90	21	30	145	97	104	413	440	30,241
January.....1929	135	249	6,169	302	2,368	71	169	204	13,019	1,178	43	2,158	43	372	60	52	946	103	5	14	101	113	121	412	235	29,375
February.....1930	135	235	10,332	207	1,269	43	152	162	14,008	552	4	1,928	44	298	29	30	565	67	20	23	74	155	91	320	431	31,882
February.....1929	129	247	10,288	276	2,009	44	159	190	13,313	1,022	28	1,939	68	388	62	39	830	73	5	9	87	134	93	339	316	32,565
March.....1930	195	384	13,011	264	1,595	48	157	228	19,551	936	10	2,364	55	452	56	45	682	62	27	16	106	265	102	407	559	42,182
March.....1929	230	410	16,062	370	2,632	73	244	262	17,797	1,330	22	2,526	52	752	70	47	1,240	87	25	21	113	172	210	508	455	46,348
April.....1930	216	492	14,055	300	1,684	52	153	252	21,757	1,242	7	2,740	71	566	57	61	903	47	47	24	147	314	98	480	564	47,032
April.....1929	368	518	18,175	352	3,054	111	239	286	22,790	1,576	16	3,425	52	852	83	121	1,475	101	29	33	157	244	159	622	474	56,278
May.....1930	212	544	12,825	373	1,504	59	152	213	19,758	1,191	14	2,531	49	717	36	93	737	59	55	20	147	305	115	452	456	43,245
May.....1929	335	462	15,965	350	2,847	78	272	326	22,364	1,453	12	3,234	150	740	62	76	1,547	125	38	31	165	242	149	621	439	52,875
June.....1930	183	481	9,761	261	1,113	56	118	158	15,669	889	5	1,917	56	446	29	43	581	54	38	22	109	207	102	412	352	33,512
June.....1929	229	377	13,234	307	2,418	79	290	229	19,528	1,315	6	2,698	51	694	58	65	1,222	97	33	19	157	171	153	505	474	45,075
July.....1930	194	388	10,947	338	1,080	47	124	209	19,841	882	8	2,477	50	577	39	41	583	71	43	11	104	262	88	460	409	39,888
July.....1929	306	571	18,056	318	2,815	104	478	275	24,503	1,469	17	3,741	48	692	86	56	1,326	132	17	40	177	254	175	564	999	57,946
August.....1930	171	251	9,544	277	707	32	91	142	17,086	604	3	2,223	51	405	33	27	436	72	26	19	102	184	85	399	295	33,758
August.....1929	263	436	16,651	362	2,262	63	396	235	22,405	1,274	4	3,188	70	646	61	72	1,212	135	24	31	176	255	116	598	841	52,540
September.....1930	171	191	9,716	217	1,018	33	60	155	17,531	622	5	1,827	63	360	41	25	402	75	21	12	92	172	102	317	249	33,933
September.....1929	290	348	15,337	268	2,381	46	382	239	19,470	1,003	12	2,731	52	481	46	48	1,028	120	16	27	96	146	144	487	769	46,561
October.....1930	186	265	8,485	144	1,738	28	60	174	18,155	678	3	1,797	58	391	23	30	357	56	26	13	91	177	198	321	252	34,237
October.....1929	288	394	15,815	295	2,645	61	353	280	20,978	1,199	18	2,797	82	623	56	63	1,140	116	36	26	155	206	124	627	764	49,885
10 Months.....1930	1,823	3,480	107,430	2,623	13,316	439	1,253	1,862	176,589	8,323	71	21,639	540	4,557	394	423	5,944	653	324	190	1,113	2,142	1,085	3,981	4,007	369,910
10 Months.....1929	2,558	4,013	145,839	3,199	25,482	730	2,990	2,525	196,597	12,837	177	28,465	736	6,144	644	640	11,668	1,090	230	255	1,383	1,936	1,452	5,281	5,754	469,930

Truck Production

(U. S. and Canada)

	1930	1929	% Loss
January	40,189	57,765	-28.1
February	51,984	65,950	-19.1
March	67,769	79,587	-12.9
April	70,945	91,855	-21.6
May	57,791	94,940	-39.0
June	48,669	98,164	-50.4
July	41,296	78,703	-47.5
August	38,594	59,985	-35.5
September	43,491	54,683	-20.3
October	38,579	66,235	-41.7
November	33,180	50,365	-34.0
11 Months Actual ..	532,487	798,232	-33.2
December	32,000*	28,579	+12.0*
12 Months Estimate	564,487*	826,811	-31.7*

*Estimate

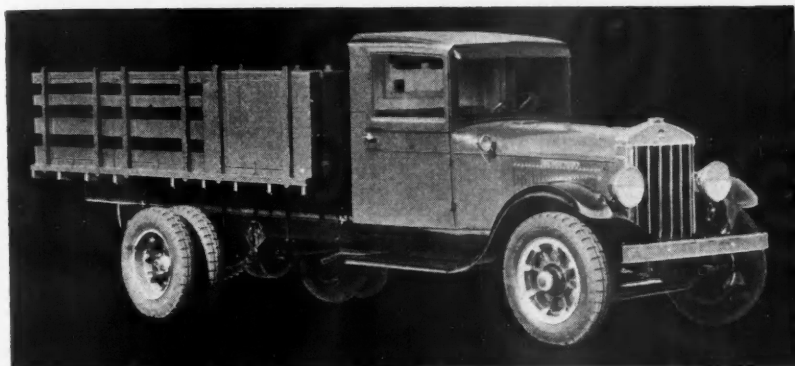
Foreign Truck Sales

(Comprise Exports, Foreign Assemblies and Canadian Production)

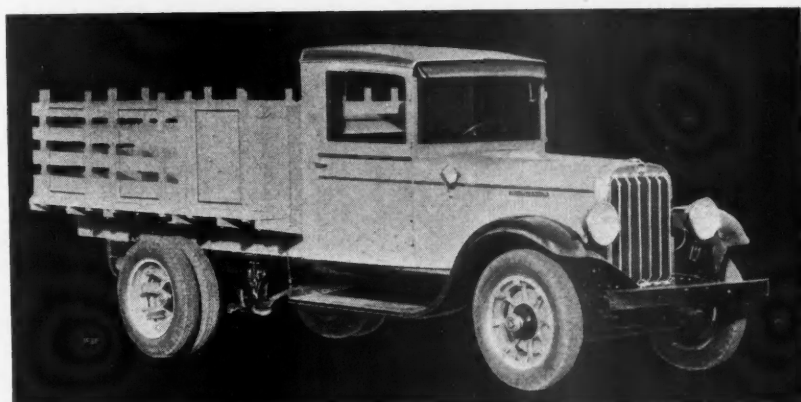
	1930	1929	% Loss
January	21,889	23,119	-5.4
February	22,050	30,905	-28.7
March	21,902	39,872	-45.2
April	22,494	33,378	-32.4
May	20,734	28,838	-28.2
June	16,362	32,176	-49.2
July	10,770	38,623	-72.0
August	13,943	29,120	-51.8
September	11,881	23,084	-48.7
October	8,674*	23,505	-63.0*
November	9,390*	19,609	-52.0*
December	8,300*	16,700	-50.0*
12 Months Total....	188,389*	338,929	-44.4*

*Estimate

REO ILLUMINES LINE WITH BRIGHT-WEAR AND COLOR



Chromium-plated radiator, radiator bars and lamps shines Reo's improved 3-tonner



Reo Super-Tonner is now furnished with 4-speed gear-set and bevel rear for duals

CHASSIS improvements, attractive exterior embellishments achieved through the use of chromium-plating and a wide range of color combinations and provisions for increased driver comfort characterize Reo's new and improved line of Speedwagons and trucks.

The Reo Super-Tonner, in both the 129 and 135-in. wheelbase sizes, is now furnished with a Clark four-speed transmission and a heavier semi-floating, spiral bevel rear axle for dualing. The $3\frac{3}{4}$ x 5-in. six-cylinder engine, developing 80 hp. at 3200 r.p.m., is retained unchanged. Among the improvements affecting appearance are full chromium-plating of radiator, heavier fenders with heavier running boards and running-board mats, heavier hood fasten-

Super-Tonner Now Has 4-Speed Transmission and Heavier Rear Axle

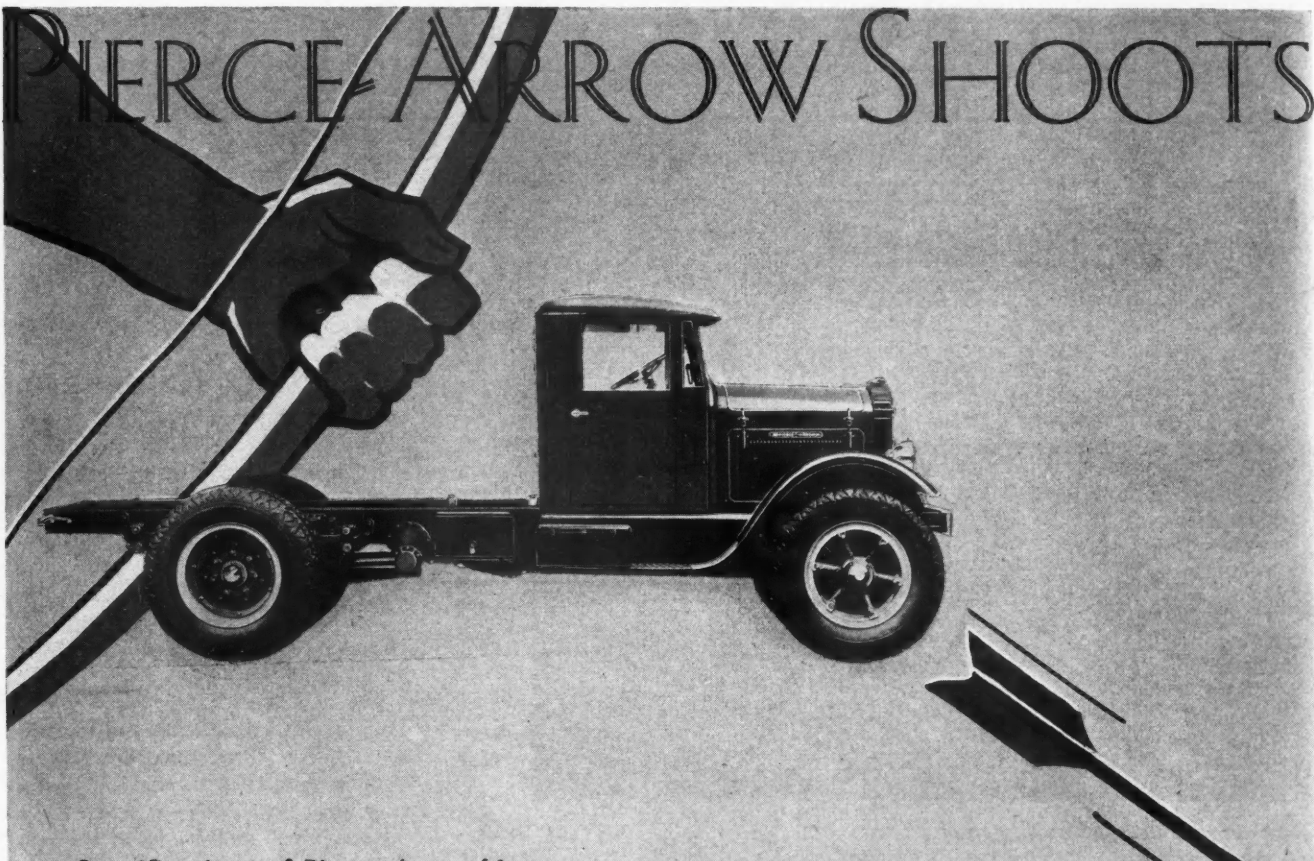
ers, and new large hub caps carrying the Reo emblem.

The new rear axle now accommodates dual wheels equipped with 32 x 6-in. tires, provides greater braking area, 289 in., and has a sturdier axle shaft, $1\frac{3}{4}$ -in. diameter at the spline end and $2\frac{1}{4}$ in. at the bearing end. Two tapered roller bearings, back to back, support the axle shaft at the wheel end. With a low gear ratio of 6.57 to 1 in the transmission and a ratio of 5.2 to 1 in the rear axle, a total reduction of 34.1 to 1 is provided.

Marked changes in the outward appearance of the 2 and 3-ton Reo chassis are the features of the improved heavier models. A large chromium-plated radiator extending above the hood and protected by six heavy chromium-finished bars, fastened with acorn nuts top and bottom, greatly contribute to the attractive appearance and impression of massiveness these models create. A specially constructed oval filler cap also adds to the style of the radiator. Eleven-inch chromium-plated headlamps, heavier fenders and heavier running boards are also incorporated in the heavier models.

The same eye-attracting mode, as well as provision for more driver comfort, is carried out in the new cab. New and improved trim is used in the seat and back. Chromium-plated cowl lights add to the stylish appearance. New heavier hardware is used throughout. The retainer which holds the shatterproof glass windshield in place is also chromium-plated. An inside sun visor and convenient pockets for maps, gloves and other articles are provided. All cabs are three-point suspended. Finish of the cab is optional, a wide range of color combinations being available.

PIERCE-ARROW SHOOT



Specifications of Pierce-Arrow Line

Model	PT—2-ton	PW—3-ton	PV—5-ton	PZ—8-ton
Gross weight	12,000	18,000	28,000	34,000
Wheelbase and price	160—\$2,950	150—\$4,150	160—\$5,950	168—\$6,950
	180—\$3,000	170—\$4,200	180—\$6,000	204—\$7,000
	200—\$3,050	190—\$4,250	200—\$6,050	
Tires, front	32 x 6	34 x 7	10.50/24	36 x 7
rear	32 x 6D	34 x 7D	42 x 9D	40 x 8D or 40 x 16S
Engine	6—3¾ x 4½	6—4½ x 4½	6—4¾ x 4¾	6—4¾ x 5¾
Piston displacement	298	361	479	611
Power	70 hp.	77 hp.	103 hp.	130 hp.
Transmission, make	Clark	Covert	Covert	Pierce-Arrow
speeds and mounted	4—unit	4—unit	4—amidships	4—amidships
Rear axle, make and type	Timken bevel	Timken worm	P-A worm	P-A worm
Brakes, service	4-wheel vacuum	4-wheel air	4-wheel air	4-wheel air

UNVEILING of a complete new line of Pierce-Arrow trucks during the New York Auto Show ended curiosity concerning the line which has existed ever since it became known that Pierce-Arrow would actively re-enter the truck field. Traditions of the name of one of the oldest manufacturers in the business indicated that the models would belong to the heavy-duty quality group and would be worm-driven. Circumstances which brought about design of the several models of a new line at the same time suggested the incorporation of many modern features in the new models.

Six models, shown to the public for the first time in New York City showrooms of the company during Auto Show week, proved both assumptions to be correct. Prices ranging from \$2,950 to \$7,000 and nominal

tonnage ratings from 2 to 8 tons position the line in the expected group. Six-cylinder engines with downdraft carburetion, and four-wheel brakes, power-operated, on all models, reflect the modern mode of design. Also in accord with Pierce-Arrow practice, established in 1928, is the use of vehicle gross weight rating with nominal tonnage classification. Worm-drive rear axles, pioneered by Pierce-Arrow, are embodied in all models except the 2-ton, although dual reduction axles are available in place of worm-drive at slight additional cost.

The new units comprise a 2-ton model of 12,000 lb. gross weight rating; 3-ton, 18,000 lb.; 4-ton PX, 24,000 lb.; 5-ton, 28,000 lb.; 8-ton, 34,000 lb., and a special 34,000 lb. six-wheeler for extra heavy duty.

Dual ignition, consisting of two complete Delco-Remy firing units, are used in all chassis with the exception of the 2-ton series. Engines throughout are six-cylinder L-head type of Pierce-Arrow design. Dimensions of cylinders and power output are noted in the accompanying table.

Cast-iron pistons and connecting rods are matched in sets for balance. The crankshaft is statically and dynam-

6 SIXES INTO FIELD

Comeback to Active Competition Marked
by Line Engineered in Conformity With
Company's Established Policy of Quality

ically balanced and carried in seven large bearings. In the 2 and 3-ton chassis the crankshaft is 2 $\frac{3}{4}$ -in. in diameter, with total bearing length of 13 $\frac{1}{4}$ in. In the 5-ton chassis, diameter of crankshaft is 3 in., and total bearing length 15 in., while in the 8-ton chassis, diameter and length are respectively 3 $\frac{1}{2}$ and 16 $\frac{1}{2}$ in. An impeller-type pump, of airplane-engine design, furnishes force-feed lubrication to main, connecting rod and camshaft bearings as well as the helical gears in the timing train.

Engine and transmission are combined in one unit on the 2 and 3-ton units. In all other models the transmissions are mounted amidships. Fuel, air and oil filters and governors are standard equipment on all models.

Rear axles are of full-floating type with alloy-steel shafts which carry driving torque only. On the 5 and 8-ton chassis a torque arm is pivoted on the axle. On the 2 and 3-ton models, drive is taken through radius rods and torque through the springs.

Four-wheel brakes are used on all four-wheel models. The 2-ton chassis is equipped with Bendix brakes operated by a vacuum booster, and the 3, 5 and 8-ton series are

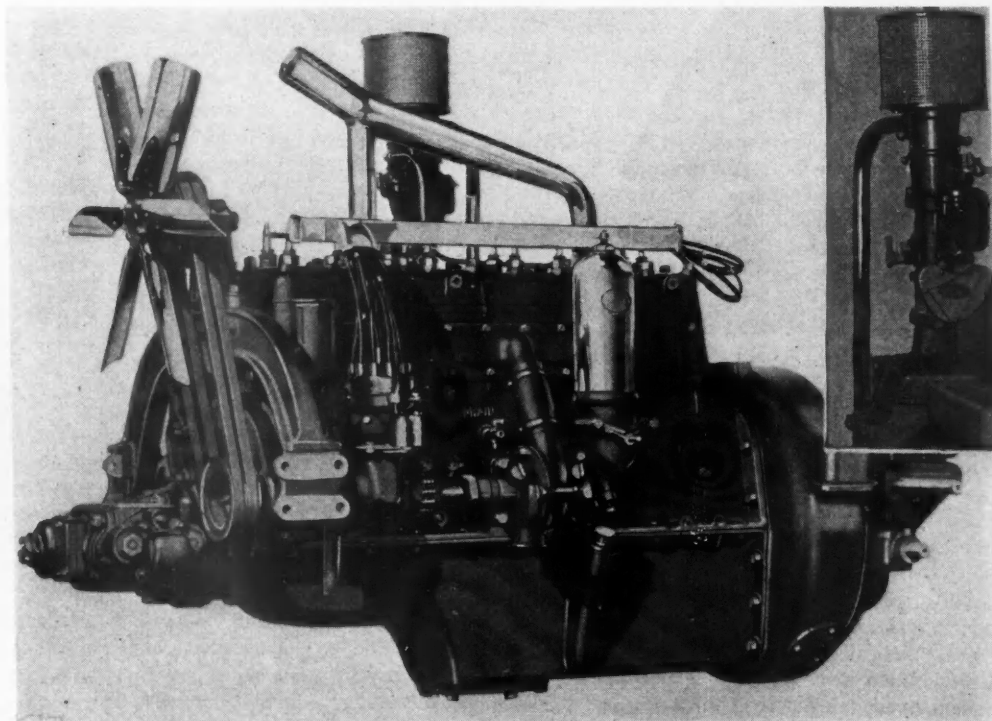
equipped with internal air brakes operated by a two-cylinder compressor of Westinghouse design and an air tank.

Standard equipment includes all-steel cowls, crown front fenders and front bumper in addition to the usual items. Chassis lubrication is by capillary wick magazine oilers. An all-steel cab with seats adjustable to three positions is available for all chassis at additional cost. Bodies will be furnished on order to purchaser's specifications.

The six-wheeler corresponds to specifications of the 5-ton unit except for capacity, wheelbase, frame dimensions and double rear wheels. Frame of the 8-ton chassis, which is made of chrome nickel steel, measures 10 x 3 x 5/16 in., compared with 9 $\frac{1}{2}$ x 2 $\frac{1}{2}$ x 5/16 in. on the 5-tonners.

The engine is supported at the front by a sturdy arched steel trunnion. The air compressor is placed ahead of the crankshaft end

Downdraft Zenith carburetor is fitted with air cleaner and crankcase ventilation connection



WHAT SHOULD THE GOVERNOR GOVERN?

CONTINUED FROM PAGE 22

Obviously, the more a truck is operated in low or intermediate gears, the more chance there is for racing the engine while pulling "in gear." Truck designers provide more speeds in heavy-duty trucks than lights jobs, as a general rule. Therefore, it is natural to assume that governors are more likely to be incorporated in heavy-duty trucks than in smaller units. A glance at the specifications tables in this issue shows that only one truck model in 35 of 1-ton capacity is equipped with a governor as regular equipment, while practically three out of four of 2½ tons and more are factory-equipped with governors.

With the question of putting a stop to racing engines out of the way the proposition of controlling vehicle speed by a governor operated by the engine is next in order. Anyone who thinks that all there is to controlling vehicle speed is adjusting the governor to the proper point is kidding himself. Many attempts to govern vehicle speed have failed because those undertaking the job did not understand or give consideration to what takes place when a governor is so adjusted. Many attempts at governor control have failed because the only thought behind the installation was that governing was a good thing and that some arbitrary vehicle speed marks the boundary between safety and danger or profit and loss.

When a governor, operated by the engine, is used to control maximum speed of a vehicle rather than buzzing of the engine, the effect upon engine power must be considered. In many cases the engine is governed much below its effective speed. Naturally, the job falls down because the job is now under-powered. The truck has no acceleration, a lot of gear-shifting is necessary, and it is hard to make hills. Under these conditions it is only natural that the driver should kick. Driving is more difficult, the truck lags when the traffic light changes to green.

Let us consider the case of the so-called speed trucks; the vehicles with lots of piston displacement and high-speed rear-axle ratios. If the vehicle speed is cut down, the engine speed is likely to be restricted below its useful range. In other words, although the engine has plenty of power, the governor, under these conditions, will throttle it down below par. For illustration, an engine which develops 40

hp. at 2000 r.p.m. which might give a vehicle speed of 40 m.p.h. would develop only a little more than 20 hp. at 1000 r.p.m., at which speed it would be governed in order to restrict vehicle speed at 20 m.p.h. With only 20 hp. available, the truck "can't get out of its own way." The "don'ters" take a bow.

Those in favor of governors have a snappy comeback at this point. Experience of fleet operators indicate that it is possible to operate trucks of this class efficiently and economically with governor control by changing rear-axle gearing to a slower ratio. The engine is governed at a speed somewhere near the power peak, with proper reference to the torque curve, then a rear-axle ratio is chosen which will reduce vehicle speed to the desired maximum. This setup enables the engine to run at higher speed for a given vehicle speed, thus developing more power. The "doers" are now ready for some applause.

• Not a Cure-All •

THERE are disadvantages in increasing the number of engine revolutions per mile, particularly if the increase be carried too far. As one fleet owner expressed it: "Engineers are giving us trucks with good high-speed performance. They can make time without racing engines because they have plenty of power and fast axles. After I pick out that kind of a job, why should I change the rear-axle gears, run the engine more turns per mile and use more gas just to put on a governor? I prefer to check the cowboy drivers in other ways." The most ardent advocate of governors will admit that there are certain conditions under which governors are not desirable. They will battle long and earnestly to reduce the number of conditions to which they must agree, but they will grant that governors are not a cure-all for all evils of operation.

Efficiency depends upon a proper balance between engine speed and rear-axle ratio to suit particular operating conditions. Some of the largest fleet operators study each job separately, because trucks operate in several territories under varying conditions and have different jobs to perform. Hence, the governed speed of the vehicle is not the same in all cases, and gear ratios vary. Some go so far

as to change ratios when a truck is switched to another route.

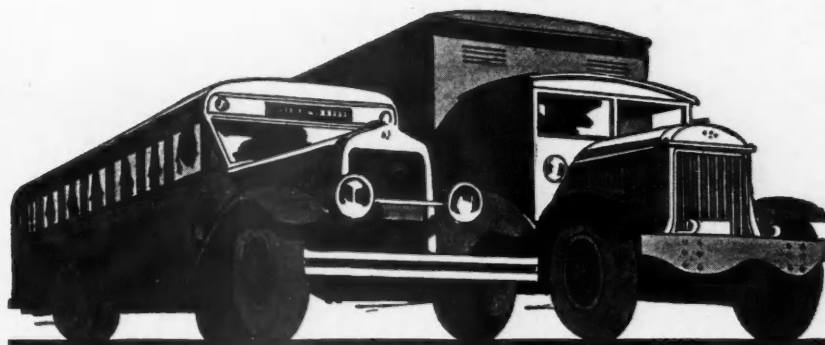
After all, in the long run, results are what count in fleet operation, and the successful operator is the one who shows the best record of deliveries and operating costs. The man who is concerned with the success of his job and with the cost of his operation considers the balance between speed of delivery and maintenance cost. On some operations so much depends on speed that maintenance cost and life of the equipment are hardly of any importance. On the other hand, it may be reasonable to suppose that careful planning of the route and maintenance of a good average speed may improve not only delivery time but also operating economy.

Tests have shown that the maximum speed is not the most important factor because the average run between any two given points is made at a relatively moderate average speed. A careful driver, by watching the road and taking advantage of traffic conditions, can make his route just as surely and more safely than the other kind who may loaf in traffic or at unloading points and then step on it.

When commercial vehicles are being used in large fleets, as service cars or salesmen's cars, some of the larger fleet operators provide governor control to limit the cars to a reasonably high vehicle speed, such as 40 to 45 m.p.h. As one transportation engineer put it: "We have found in the light truck field that it is absolutely essential to use a governor. This is primarily due to the fact that the operator is generally a salesman rather than a driver."

We shall close the discussion with the opinion of a prominent truck engineer and a large fleet operator. W. J. Baumgartner, chief engineer of Relay Motors Corp., says: "We use governors as standard equipment on all our heavy-duty trucks and install a few governors as special equipment on small trucks. If governors are not standard equipment they should be put on all trucks which operate on long-distance hauls, such as moving vans, intercity freight hauling, etc. Also on trucks which have a large amount of gear work, such as dump trucks."

Voicing the opinion of many of the large fleet operators, a prominent operating engineer says: "We feel that trucks of all sizes should be equipped with governors and we install them on vehicles that are not equipped with same at the factory. We know from our service records that when many types of vehicles are operated without governors that the upkeep of the engine in the vehicle is very high."



A mere mention

of Lockheed Hydraulics as standard brake equipment is easing the sales job for a growing number of manufacturers of trucks and buses.

This tallies with experience in the passenger car field.

Public preference is strongly toward Hydraulics no matter where you find it—among truck and bus operators, as among car owners.

HYDRAULIC BRAKE COMPANY

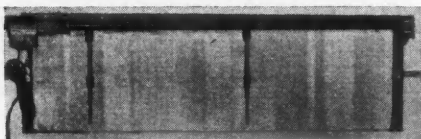
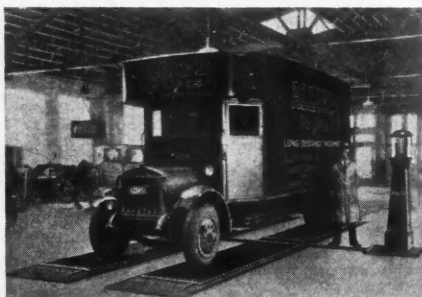
DETROIT, MICHIGAN, U. S. A.

(Division of Bendix Aviation Corporation)

LOCKHEED HYDRAULIC

Four **BRAKES** *Wheel*

EQUIPMENT FOR SHOP AND TRUCK

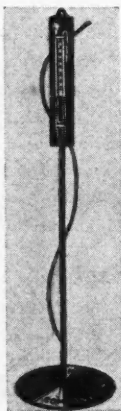


Brake Tester and Wheel Aligner

The Weaver Manufacturing Co., Springfield, Ill., has brought out a heavy duty automatic brake tester and wheel alignment indicator of the driveover type for trucks and buses. Relative braking effort exerted by each brake is immediately shown by the rise of colored liquid in the gages, which are positioned to correspond to the four wheels. The alignment indicator consists of two plates which move toward or away from each other as the wheels of the truck driven over them are toed out or in. Misalignment present in number of feet side drag per mile is indicated on a large dial.

Back Pressure Gage

A sluggish engine may be caused by back pressure caused by a clogged muffler. Whether the seat of the trouble is in the muffler can be determined by use of a pressure gage offered by the Powell Muffler Co., Utica, N. Y. To test back pressure, tap the exhaust pipe just ahead of the muffler and connect rubber hose to the gage. Then speed up the engine and compare the reading on the gage with the reading on the chart, furnished with the gage. Tools



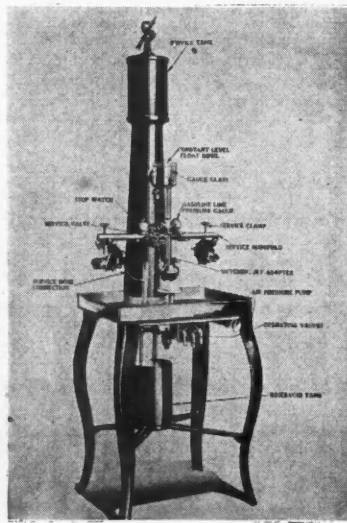
for tapping and plugs, together with chart, are furnished with the gage. The price is \$25.00.

Handy Wiper

The Handy Safety View Windshield Wiper, made by the Handy Governor Corp., Detroit, is electrically operated and consists of two blades traveling horizontally across the windshield. The blades, supplying a multiple wiping edge, are backed by one-piece bases.

Carburetor Test Stand

A new stand for testing carburetors for leakage and pressure; inspecting float level, metering jets, economizer valve and syringe valve, and for making accurate readings on all functions of a carburetor, has just been perfected by the Bendix Stromberg Carburetor Co., South Bend, Ind., a subsidiary of Bendix Aviation Corp. When testing, the carburetor is secured to one of the flanges mounted on the service manifold of the test stand. The various devices embodied in the stand are shown in illustration.

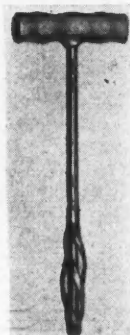


Firestone "R" Rim

The Firestone Steel Products Co., Akron, Ohio, has developed a new type "R" truck rim made in one piece. It is interchangeable on the same wheels with other types of Firestone truck rims, since the standard 28 deg. Firestone mounting bevel has not been altered. The Firestone "R" rim is a continuous-base rim with one side flange integral with the base and one continuous removable side ring. A new type of locking ring is riveted at one end to the removable side flange which is easily removed with a tire tool or screw driver. The "R" rim is made in 7, 8, 9 and 10 in. sizes, in 20, 22 and 24-in. diameters.

Valve Guide Cleaner

The Scully valve guide cleaner, made by the Scully Steel & Iron Co., 2364 S. Ashland Avenue, Chicago, is a simple hand tool consisting of a rod on one end of which is mounted spiral blades and the other end a plated steel handle. It is made in six sizes ranging from 5/16 in. to 9/16 in. and lists at \$1.95.

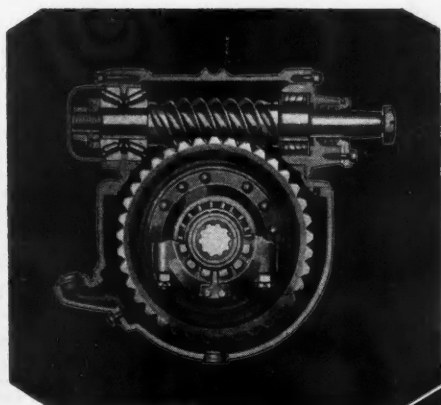


for building roads
... for operating on
finished roads ...

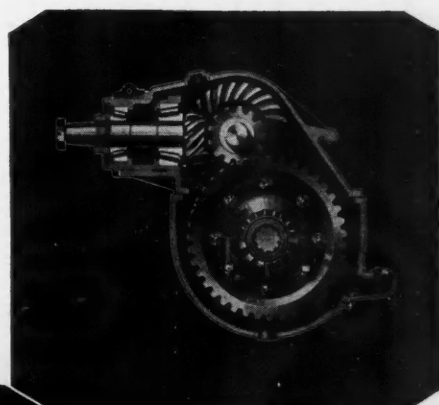
TIMKEN AXLES

Timken offers a complete line. Rear axles are worm, double-reduction, and bevel drive; with worm and double-reduction driving units interchangeable for each size.

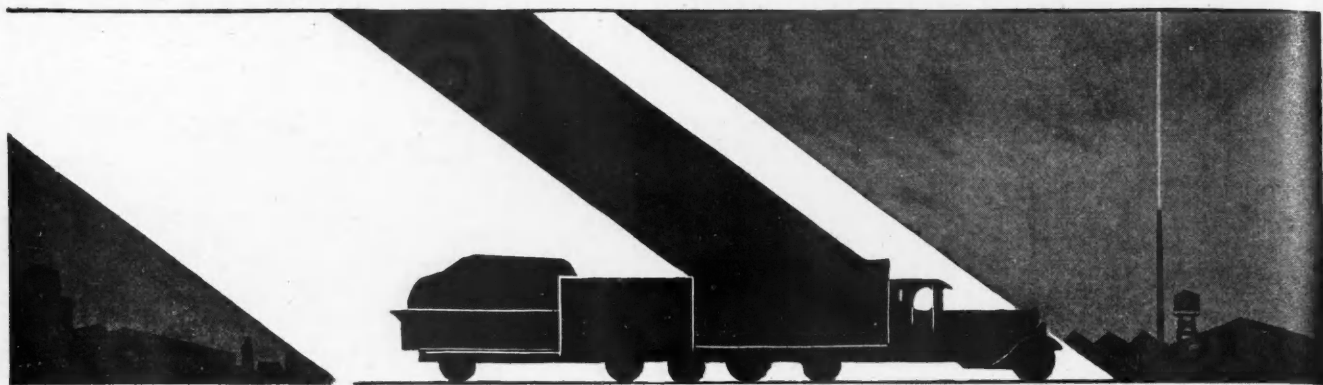
Timken fronts offer these advantages—wide track for better steering, uniform design for all sizes, higher capacities.



At St. Louis
January 12-16
Space B-168



THE TIMKEN-DETROIT AXLE CO.
DETROIT, MICHIGAN



TRUCK INDUSTRY NEWS

The Pacific Coast Transportation Exposition, scheduled March 15-28, will be international in scope. Trucks, buses, road-making machinery, accessories, etc., will be major features of the exposition. John De Moulin, manager and director, will have headquarters in the Chamber of Commerce Bldg., Los Angeles, Calif.

Chevrolet Motor Co., since acquiring Martin-Parry Co. of Indianapolis, is rapidly completing its plans to provide its dealers with standardized bodies at low cost through mass production. All operations are centered in Indianapolis, and the company is rapidly opening branches in 52 points in the country. The body division is headed by J. A. Jamieson as general manager.

General Motors Truck Co. has announced price reductions of from \$50 to \$150 on three light-duty models and of \$600 on all types of the six-wheel heaviest-duty model, coupled with increases in guaranteed capacity ratings on seven models, ranging from 500 to 530 lb.

The National Commercial Body & Equipment Assn., organized in St. Louis in October with A. A. Ritcheson as president, was formed to obtain for its members an equitable share of the commercial automobile body business, which was said to show a tendency to be deflected into a few national manufacturing and distributing channels. A second convention of the association is scheduled to be held in St. Louis Jan. 14-15.

C. B. Cook is now manager of the replacement sales for New Process Gear Co., Inc.

H. W. Roland, sales manager of the commercial division of Reo Motor Car Co., has been appointed a member of the Truck Committee of the N.A.C.C.

David Beecroft, vice-president, Bendix Aviation Corp., succeeds C. H. L. Flintermann as vice-president of the M.E.A. in charge of Division "A."

I. A. Hungerford, president Borden's Farm Products Co., Inc., has been elected president of the Motor Truck Association of America, Inc.

F.W.D. business for 1930 has run 20 per cent ahead of 1929, according to Walter Olen, president.

Firestone Tire & Rubber Co. showed a net profit of \$1,541,034 for year ended Oct. 31, 1930.

A new line of trucks will be displayed for the first time by the Atterbury Motor Car Co. at the Buffalo show Jan. 10 to 17.

The Autocar factory has resumed full-time schedule, which will continue for the remainder of the winter season.

A. H. D. Altree, retiring from active business, has resigned as vice-president of the American Bosch Magneto Corp., Inc.

F. D. Allen, formerly branch manager of the American LaFrance Motor Truck Co., has been appointed manager of the truck department of the Massachusetts Motor Car Co., distributors of Dodge Bros. trucks.

Four new distributors have been appointed by Hercules Motors Corp., namely, J. S. Innes, Ltd., Toronto; Tractor & Thresher Co., Ltd., Saskatoon; E. B. Kelley Co. of New York City, and A. H. Krigger & Co. of Pittsburgh, Pa.

F. J. Semple succeeds George F. Smith, resigned, as general manager of the R. M. Hollingshead Co., makers of Whiz products.

Step-N-Drive Truck Corp. has moved its manufacturing operations to Detroit, according to John Nicol, president.

Approximately 84 truck depots have been established by Dodge Bros. in its national distribution arrangement known as the truck depot plan to facilitate prompt deliveries of new trucks to dealers.

A. W. Herrington has been named chairman of the Military Motor Transport Advisory Committee of the S.A.E. which is being appointed to cooperate with the Quartermasters Corps of the U. S. Army.

W. F. Clancy has been appointed Detroit regional truck representative for Dodge Bros.

The Martin Trailer Co. has been purchased by the Highway Trailer Co. of Edgerton, Wis.

The Badger Tractor & Equipment Co., Milwaukee, has been appointed wholesale representative of Sterling trucks in Wisconsin.

Robert W. Woodruff, chairman of the board of the White Motor Co., announced the election of Ashton G. Bean to succeed him as president of the company.

Standard Motor Truck Co. has added three new Fisher-Standard models ranging from 1 to 2 tons to its line. See specifications, page 65, for details.

Net profit of Mack Trucks, Inc., for nine months ending Sept. 30 is \$2,384,875, as compared with \$5,932,359 in 1929.

STUDEBAKER
1½ TON CHASSIS

\$**695**



6 CYLINDERS

70
HORSEPOWER

THE ONLY TRUCK EVER SOLD AT LESS THAN \$10 PER HORSEPOWER

The Studebaker 1½ ton chassis, 130-inch wheelbase, at \$695—with a 70 horsepower, 6-cylinder engine—is the most powerful low priced 1½ ton truck built. To buy equal power you must pay at least \$570 more!

And in its 2 ton chassis of 148-inch wheelbase, at \$895, Studebaker offers the world's lowest priced 2 ton truck.

Studebaker trucks are built throughout from quality materials with quality workmanship—by Studebaker—a name known for 78 years for the long dependable service of its products.

S. P. A. TRUCK CORPORATION, SOUTH BEND, INDIANA

1½ TON

130" CHASSIS . . \$695
160" CHASSIS . . \$775

Dual rear wheels and auxiliary springs optional at extra cost

2 TON

148" CHASSIS . . \$895
160" CHASSIS . . \$945
136" CHASSIS . . \$945

Dual rear wheels standard.
Auxiliary springs optional at extra cost

All prices at the factory

BODIES

Cabs and all standard bodies available with both 1½ and 2 ton chassis including panel, screen, express, stake, canopy, grain, cattle bodies.

Half-ton Panel or Screen complete units \$895 at the factory

Correspondence with responsible dealers in open territory is invited. Studebaker or Pierce-Arrow truck franchises offer unusual profits.

STUDEBAKER *Trucks*

FARMERS'LL CRASH AND CARRY MORE MARKETS

CONTINUED FROM PAGE 31

does not pay, but it is probable that in years of local scarcity or high prices motor truck jobbers will again reach out to these counties for supplies in some volume.

Twenty per cent of the growers interviewed stated they expected to make greater use of the truck in shipping fruits and vegetables in the future. Of the remaining 80 per cent most expected to utilize the truck to about the same extent as in the past. There was much dissatisfaction among growers in dealing with "truckers" because of alleged breaches of contract, bad checks, unpleasant bargaining, and trickery; each community had its grievances of this nature. However, Michigan, with more experience in jobbing by truck, has passed through this stage and these objections have largely passed, as they probably will in western New York.

In the opinion of close observers, the volume of motor truck shipments in regions of fairly stabilized motor truck merchandising tends to vary less than the rail shipments if high-class markets are available. In years of high prices the truckmen reach out farther for supplies, but consumption is somewhat curtailed; in such regions the railroad shipments are the surpluses above the requirements of markets with the motor truck range, in a measure.

○ Demand Factor ●

ON the contrary, the volume of motor truck shipments where the outlet is to mining or rural communities may fluctuate more than rail shipments. The truck shipments in many of these areas consists largely of low-grade products. When supplies are light and demand keen in distant cities, part of the lower-grade products are shipped out by rail, which may leave a considerably smaller percentage for truck distribution.

In 1928 the railroad unloads of fruits and vegetables at Buffalo, Rochester and Syracuse from western New York were only 620 carloads as compared with long-distance motor truck receipts at these markets of 7322 car equivalents. Now practically all the needs of Rochester and Syracuse for western New York products are supplied by motor truck, and Buffalo nearly so.

The population of 27 counties in

western New York in and near the producing districts was 2,896,580, according to preliminary figures of the 1930 census. The many cities and towns are so distributed over the territory that most of their needs for western New York produce can be supplied with short or intermediate hauls. These markets are now well supplied with western New York produce by motor truck and but little increase is possible within the territory itself except as population and production change.

The practical start of shipping fruits and vegetables by motor truck from southwestern Michigan was made in 1919, and the volume has steadily increased since then. The first truck shipments of note were to Chicago, caused by damaging congestion in boat and rail shipping. Later, Detroit was added as a motor truck market, and in 1924 the first load was trucked to Indianapolis. In 1928 a few truckloads went to St. Louis, and in 1929 and 1930 Louisville was added as a motor truck market, and occasional loads went as far as Cincinnati, Memphis, Des Moines and Canada.

The volume moving by truck became commercially important in 1925, and is estimated to have trebled since then. The percentage and quantity moving by truck has increased in each recent year. Likewise, the radius of distribution of truck shipments has increased from year to year. From a 60-mile haul to Chicago the radius has widened until practically all shipments up to 250 miles are by motor truck except some boat shipments to Chicago and Milwaukee. Tentative plans of chain stores and trucking companies indicate that this circle will be further widened.

In this territory high-type roads are of recent origin, and truck transportation got a late start. In fact, something retards truck transportation after roads are available. Perhaps it is lack of experience, absence of example, custom, the peculiar location and nature of production, or a combination of these.

Observations indicate that extensive long-distance trucking is usually traceable to the efforts of some individual. This person may have innovated shipping by truck to distant points with considerable success. Others learn of his profits and enter the same or similar lines, swelling the vol-

ume and increasing services offered, until movement becomes important.

Remote regions recently tapped by good roads are usually unaware of the trucking opportunities and little progress in long-distance trucking may occur until the ice is broken.

Long-distance truck transportation of fruits and vegetables in southern Illinois has grown up since 1926 and in southern Indiana chiefly since 1925. Hauling 75 miles or farther to primary markets is largely in the first or experimental stages in this territory, with a few notable exceptions. A characteristic of the use of the truck in this region was the supplying of rural, mining and small-town trade by motor truck jobbing or peddling.

In some accessible sections adjacent to Federal-State highways, the movement of apples, peaches, berries, table tomatoes and sweet potatoes practically doubled in each of the years from 1926 to 1928. Yet in 1928 truck shipping of fruit was important and of large volume at only a few Illinois fruit centers.

Of 139 farmers interviewed, 56 per cent stated they intended to make greater use of the truck for shipping fruits and vegetables, 14 per cent were completely supplying the available truck trade, 25 per cent planned to make the same or less use, and 5 per cent were uncertain. On the whole, it seems there will be an increase in truck shipments to the present motor truck area and an extension of that area.

DATA ● Strawberries ●

DATA have been compiled on carlot shipments of strawberries from the Chadbourn and Wallace sections of North Carolina as follows:

Year	Rail (Cars)	Truck (Cars)	Per Cent by Truck
1928	2151	136	6
1929	1483	401	21
1930	765	468	38

The 1928 truck shipments were estimated at 70 per cent complete, 1929 at 80 per cent complete, and 1930 about 100 per cent complete. It is seen that the truck shipments of strawberries increased from about 8 per cent of total shipments in 1928 to 38 per cent in 1930. This truck movement has been almost entirely long hauls into the large markets, principally Washington, Baltimore, Philadelphia and New York. Reports by New York City receivers show 64 cars of North Carolina strawberries unloaded by truck in 1929 and 34 cars in 1930.

Figures on the strawberry movement by truck taken from the daily count of the Delaware Highway De-

TURN TO PAGE 52, PLEASE

FOR 1931:

made possible by 1930 performance

\$50 To \$600

PRICE REDUCTIONS

on

GENERAL MOTORS TRUCKS

500 lbs. to 3,500 lbs.

GUARANTEED CAPACITY INCREASES

STRAIGHT RATING

ON 10 GREAT MODELS, 133 DIFFERENT TYPES

\$50 Less

MODEL T-15: Price reduced \$50; straight rating capacity increased 1,100 lbs.—now $\frac{3}{4}$ -ton and 1-ton range... 130" and 141" wheelbases, 10 different types available...

Now \$645
(TYPE 1501)

\$70 Less

MODEL T-17: Price reduced \$70; 1-ton range... 130" and 141" wheelbases, 8 different types available—7½' and 9' body lengths...

Now \$675
(TYPE 1703)

THIS starts the new year with a big piece of value—news for truck owners. Effective today, price reductions or capacity increases—or both!—bring higher value than ever, in 10 great General Motors Truck models: affecting 133 different types of modern haulage and delivery equipment. Increased capacities mean greater earning power per truck. It is made possible by what happened in 1930. Lowered material costs were coupled with production savings. And it is a General Motors Truck policy to share such advantages with truck owners. So, more than ever, it's going to pay every truck owner to find out what General Motors Truck offers before he buys! See these trucks today. Try them out. Ask men who own them about the extra earning ability designed and built into them. Start 1931 with delivery or haulage equipment that can do a real share in building your business and profits!

(All prices: Chassis, f. o. b. Pontiac, Mich.)

A GENERAL MOTORS VALUE:

\$150 Less

MODEL T-19: Price reduced \$150; 1½-ton range... 130", 141" and 152" wheelbases—22 different types available—7½', 9' and 10½' body lengths...

Now \$745
(TYPE 2201)

\$600 Less

MODEL T-90 (six wheeler): Price reduced \$600; 5-7½-ton range... 185½", 201" and 220" wheelbases, 7 different types available... Brown - Lipe over - and - under drive auxiliary with 4-speed main transmission standard (12 speeds forward, 3 reverse).

Now \$5285
(TYPE 9001)

GENERAL MOTORS TRUCK COMPANY, Pontiac, Mich. (Subsidiary of Yellow Truck & Coach Mfg. Co.)

GENERAL MOTORS TRUCKS, YELLOW CABS and COACHES

Factory Branches, Distributors, Dealers—in over 2000 principal cities and towns

(Time payments financed through Yellow Manufacturing Acceptance Corporation plan, at lowest available rates)

FARMERS'LL CRASH AND CARRY MORE MARKETS

CONTINUED FROM PAGE 50

partment give the most comprehensive comparison available. Carlot shipments by rail, boat and truck from the Eastern Shores were reported as follows:

Year	Rail and Boat (Cars)	Motor Truck (Cars)	Per Cent by Truck
1926	2862	1086	28
1928	2121	2396	53
1929	1649	2073	56
1930	839	1129	57

Truck shipments are estimated at 80 per cent complete. The increase from 28 per cent in 1926 to 57 per cent in 1930 gives a picture of the increasing importance of the motor truck in the distribution of highly perishable products from this region. It should be noted that the percentage by truck doubled between 1926 and 1928, and has increased slowly since then in the face of short crops.

Long-distance truck reshipments of fruits and vegetables started from these two cities during the war, and have grown since. At Baltimore the growth was slow until about 1925, when the truck became an important factor in reshipments. Dealers estimated that the volume doubled between 1926 and 1928, and increased 25 per cent during 1929. The shipments of mixed cars by rail from the pier into surrounding trade territory were 30 to 35 cars a week in 1920, but only three to five cars a week in 1930.

The consensus of opinion was that the volume of business moving out of Baltimore by truck might be expected to increase further. Reshipments by truck were estimated at 24 per cent of unloads at Baltimore in 1930.

Long-distance outbound truck shipments from Pittsburgh became an important factor in 1925 and 1926. In 1928 a large railroad produce terminal was opened in Pittsburgh which lent impetus to the outbound truck movement, which about doubled in a year and a half after the opening of the terminal. An indication of the increase is shown in a railroad report showing average shipments of mixed cars to surrounding towns of 150 to 200 cars a week in 1920 compared to 25 to 50 cars per week in 1930. It was estimated that 50 per cent of the unloads at Pittsburgh in 1930 were re-shipped by truck out of the city. It is probable that future increase will

proceed at a slower rate of gain than in the recent past at Pittsburgh.

● City Markets ●

TRUCK receipts at Los Angeles during the first seven months of 1930 totaled 18,851 carloads, an increase of 1224 cars over the corresponding period of 1929. Some of this increase was attributed to an earlier season, but this is offset by a lighter crop of fruit.

Truck receipts at New York City have been lighter in 1930 than in 1929, probably because of lighter crops in the motor truck area of New York City.

At Kansas City the annual increase in truck receipts from 1927 to 1929 was estimated at 33 1/3 per cent.

There has been a steady increase in truck receipts and reshipments from Atlanta, both movements probably doubling during the past three years.

In conclusion it might be well to point out that while some regions are near a stabilized point under the present productive and consumptive conditions, others have a long way to go, and the motor truck areas may be greatly extended in some regions.

ROAD SHOW PAVES WAY FOR DANCE OF BILLIONS

CONTINUED FROM PAGE 21

Hercules "HX" series of six-cylinder engines, which develop horsepower up to 175, will be the feature of the Hercules Motors Corp. exhibit. LeRoi Co., makers of two and four-cylinder L-head engines, will exhibit its Model WT-7, 2 3/4 x 2 1/2-in. 4-cylinder engine.

Timken-Detroit Axle Co. will feature its recently developed 65200 series axle worm driving unit and 75200 series double-reduction driving unit. These will be mounted to show the interchangeability of the double-reduction driving unit and the worm driving unit in the same housing. A 58200 series rear axle bevel driving unit, together with a 75000 series rear axle double-reduction driving unit, will also be exhibited, showing the interchangeability of these two types of driving units. Other Timken exhibits will include a new wide-track front axle of the 35000 series, and Model SW-410 four-wheel, worm-drive unit for six-wheel vehicles. Included in the exhibit of the Eaton Axle & Spring Co. will be a herringbone-gear, double-reduction rear axle.

of truck radiators will be included in the display of the Young Radiator Co. A full line of radiators and unit heaters for garages are scheduled for exhibit by the Perfex Corp. Demonstrators showing the principle and operation of BK vacuum boosters will be found in the booth of Bragg-Kliesrath Corp. Titeflex Metal Hose Co. will exhibit and demonstrate its all-metal flexible tubing for fuel lines. An aluminum truck body, an aluminum concrete mixer and structural shapes and sheets will be included in the exhibit of the Aluminum Co. of America.

The Dayton Steel Foundry Co. will show single and dual pneumatic steel wheels for light and heavy-duty trucks. These wheels have demountable rims and will take various tire sizes. A general display of steel wheels in various types and capacities both in steel-tired and rubber-tired, as well as roller bearings, axles, crawler treads, Dreadnaught bottom dump crawler trailers and three-way dump crawler trailers, is planned by the Electric Wheel Co. All types of bearings used in road-building and general construction machinery and equipment will be exhibited by the New Departure Mfg. Co., the Norma-Hoffmann Bearing Corp., the Fafnir Bearing Co., and SKF Industries, Inc. A large exhibit showing plastic models of Rusco products will be displayed by the Russell Mfg. Co. Exhibits will include mechanical apparatus demonstrating what takes place in the curing of brake lining after it is applied to a vehicle. Other products to be displayed will be Rusco brake lin-

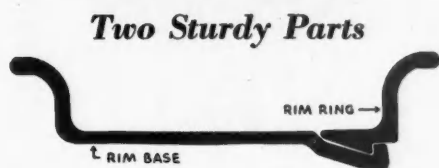
TURN TO PAGE 60, PLEASE

● Engine Accessories ●

ZENITH-DETROIT CORP. will display a line of commercial and industrial carburetors and fuel filters. Zenith's new Universal carburetor, especially designed for service in the road-construction field, will also be shown. A detailed description of this carburetor will be published in the February issue. Eisemann Magneto Corp. will exhibit high-tension magnetos for one, two, four and six-cylinder engines as well as various size fly-wheel type magnetos. Several types

GOODYEAR TYPE "K" RIMS

For Pneumatic Truck and Bus Tires



Two Sturdy Parts

The rim ring is continuous and made of heavy steel section.

The rim base is split so the integral side flange interlocks against all radial movement, thus functioning as a continuous base. This construction permits easy application and removal of tires.

Type "K" Rims are Made in All Standard Diameters, in 5", 6", 7", 8", 9-10", 11" Sizes

Proved in service since 1925 on the heaviest trucks, buses and trailers. And now used as original equipment by over 30 truck, bus and trailer manufacturers.

"K" Rims meet all requirements. Simple in design — two parts. Adequate strength... Minimum weight... Safe in service... Easy to operate... Good appearance... Low in cost.

Low service and operating cost. The open valve stem slot extending through gutter of rim, together with the transverse split of the rim base with interlocking side flange permits easy operation of rim under all conditions of service and without injury to the tire.

"K" Rim equipment and service is available through authorized rim distributors in U.S. and Canada. Our Export Department provides world-wide distribution and service.

BUDD WHEELS EQUIPPED WITH "K" RIMS

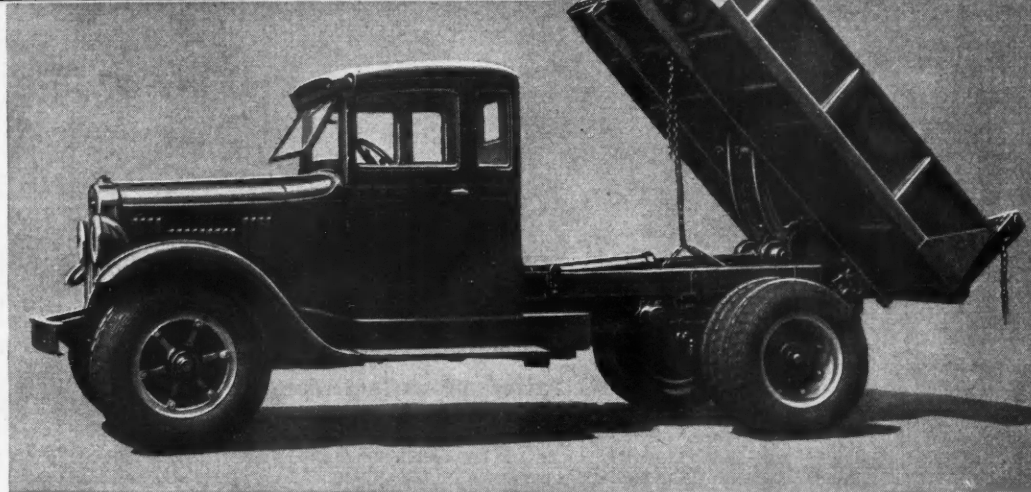
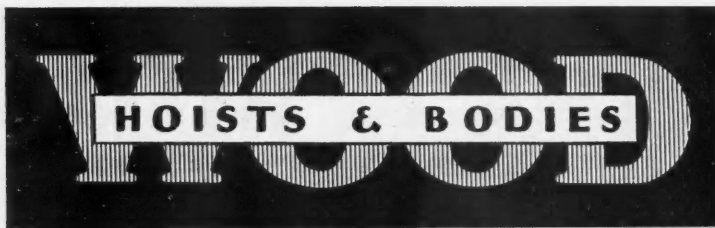


are interchangeable with similar Budd Wheels equipped with other rims. This makes the advantages of "K" Rims available at once; without adding to the servicing problem.

The Man Who Changes the Tires Likes Goodyear Rims

THE GOODYEAR TIRE & RUBBER COMPANY, INC.

AKRON, OHIO



WHEREVER DUMP TRUCKS ARE USED

The performance of the entire dumping unit and its ability to successfully and economically handle the "payload" is largely dependent upon the body.

The complete Wood line of all-steel dump bodies includes the correct type and capacity to handle every commodity and meet every dumping need.

Hoists and W Type dump bodies for chassis of 3 ton and up;

Hoists and L Type dump bodies for 1½ to 3 ton chassis;

Hoists and C Type dump bodies for 1 and 1½ ton chassis.

Wherever dump trucks are used Wood reliability and efficiency are demonstrated daily in building roads, building construction and municipal requirements.

Every chassis equipped with a Wood hoist and dump body is a more efficient dump truck.

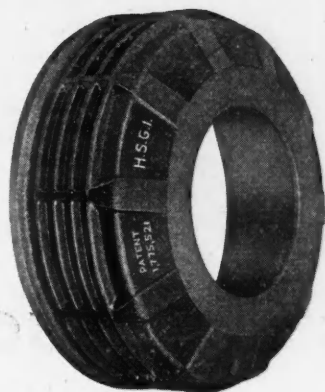
Wood service is at your elbow in principal cities of the United States and throughout the world. An organization of service for dump truck men.

TRUCK DEALERS—Send for the new 1931 Wood Catalog. It's Complete.

WOOD HYDRAULIC HOIST & BODY COMPANY
DETROIT, U. S. A.



POWER DEMANDS



HSGI

Reg. U. S. Trade Mark



HSGI

Reg. U. S. Trade Mark

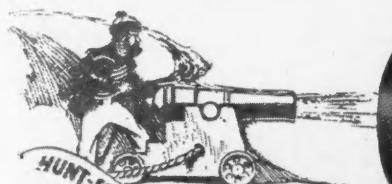


MORE POWER IN BRAKE DRUMS

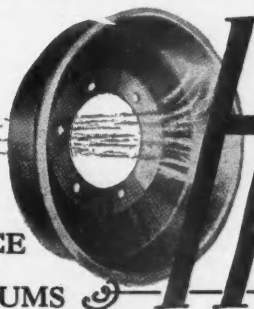
Power, the ability to resist heat and wear, is built into all HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS.

These drums aid in effecting economies . . . producing profits. They lower brake maintenance costs and insure longer productive hours which are so essential to increased profits.

H S G I is a mark of quality. It stamps a century old material especially adapted to resist wear at high temperatures. There is a HUNT-SPILLER Drum design for every truck and bus.



AIR FURNACE
GUN IRON
for BRAKE DRUMS



HUNT-SPILLER MFG. CORP

J. G. Platt, Pres. and Gen. Mgr.

V. W. Ellet, Vice-Pres.

Office and Works

383 Dorchester Avenue
South Boston, Mass.

WALKER

NOW OFFERS HEAVY DUTY HYDRAULIC ROLL-A-CAR

**A JACK THAT DOES BIG TRUCK
LIFTING JOBS WITH GREATER
EASE, CONVENIENCE, SPEED AND
SAFETY, BECAUSE —**

It lifts 7½ tons—easily—and it has the stuff built into it to stand the gaff in service every day for years.

★

Long handle and low-built frame reach any lifting point—and exceptionally high raise takes care of any lift required. Starts at 6" and raises to 22".

Precision made hydraulic unit, with honed cylinders insure maximum ease of operation, long life and trouble-free service.

★

Long, low-built frame gets under any lifting point. Roller bearing wheels and ball bearing casters roll and swivel easily.

Big broad drop-forged cap on sturdy bearing. Powerful lifting arms hold cap rigid and level. Positive safety features protect the jack and the operator.

★

Counter-balanced for quick positioning—lifts from any conceivable position. In close quarters only 4-inch stroke required.

Walker makes a complete line of jacks for heavy duty service work, including a mechanical type Roll-A-Car that lifts 6 tons—also Walker Rigid Rack adjustable bus supports. Order from your jobber.

WALKER MANUFACTURING COMPANY
Racine, Wisconsin



WALKER MANUFACTURING CO., Racine, Wisconsin
Please send us full information on
Walker Heavy Duty Jacks.

★ ★ ★ IF IT ISN'T A WALKER — IT ISN'T A ROLL-A-CAR ★ ★ ★

LET PACKARD'S FIELD ENGINEERS help you Establish Definite Replacement Periods . . .



IT'S A SAFE RULE to replace ignition cable every 10,000 miles, but fleet operating conditions vary so much that a definite period for each fleet is desirable.

If you do not now have a definite replacement period on cable, get data from us on increased power advantages. In many sections Packard field engineers are available for personal help on such problems.

THE PACKARD ELECTRIC COMPANY
Warren, Ohio



IGNITION, BATTERY, AND LIGHTING CABLE

The Commercial Car Journal

January, 1931



the 1931 Stewarts

a big money making truck

**The New Stewarts Embody Improvements
that place them far ahead of the field.**

The new and better Stewarts are being hailed as the outstanding truck value of the age by men who know the truck industry from A to Z.

Thousands of Stewarts are in use in over 600 American cities and 87 foreign countries. Many Stewarts made 8, 10 and 12 years ago are still in service.

15 Models . . 57 Wheelbases

1 to 7 Ton . . \$695 to \$5700

Liberal Finance Plan Available

the New Stewarts have been styled

will be the T Talk of T ruckdom

**opportunity for
and passenger car dealers**

FOR 18 years Stewart has built-up a world-wide reputation as a maker of quality trucks moderately priced. . . The 1931 Stewarts offer bigger value per dollar than ever before . . Appearance, rugged design, power and the most advanced engineering improvements, mark them by far "America's Greatest Truck Value."

Stewart
MOTOR TRUCKS

STEWART MOTOR CORPORATION

BUFFALO, N. Y.

and beautified to excel in appearance

Peel Your Coats; Good Times Are Coming

CONTINUED FROM PAGE 28

ence assembled and the subject under discussion is merger. In Chicago several meetings have been held quietly under the sponsorship of Mr. Cutting, who also sponsors the Chicago truck. Just which of the smaller assembled truck manufacturers have shown interest in Mr. Cutting's consolidation idea to the extent of being represented at the meetings we are not at liberty to mention. Mr. Cutting has given us to understand that he may have an announcement to make soon after the infant New Year bounces into the picture.

Obviously, the purpose of both these mergers is to effect operating economies. If purpose ceased right there, it would be a pity. Mergers of truck companies which, because of local conditions, intend to preserve their identities even after consolidation, should not only answer the question, "How can we cut manufacturing costs?" but also the much greater question, "How can we make our product, or products, more easily salable?" and, of equal importance, "How can we plan a constant growth?" The interested parties are, or should be, thinking along these lines.

Are there any dark clouds on the 1931 horizon? We see no dark ones, but we do see a spot of gray which happens to be a swarm of State Legislatures winging into action. To be exact, 44 Legislatures will buzz with legislative activity this year. It would be silly to expect a miracle, so the only thing to look for is a sheaf of bills and amendments to bills dealing with trucks. But there is nothing in this to cast any gloom on the business situation. It is just something to keep in touch with and to combat at every opportunity.

It is that way, too, with the campaign of propaganda for Federal truck regulation in which the railroads are working themselves up into a lather. Shippers are lined up with drawn bayonets on the truck side of this battle, and that's tough on the railroads. We don't class ourselves as an astute observer, but the whole stew looks to us like the last belligerent attack of the railroads before succumbing to the demand for store-door delivery and pickup service, which means widespread truck operation either by the railroads themselves or by means of controlled subsidiaries. And that won't hurt the truck business.

All in all, good times are coming, so peel your coats for action. Stop asking "How is business?" but ask

yourself "Where is the business?" then look for it and you'll find that business is good.

Test Benches Knock Out the Comeback

CONTINUED FROM PAGE 36

heading "Starter Test," is revolved in turn so that each of the armature windings is tested.

The simplest test on an ignition condenser is for short circuits. A live lead from the battery is attached to one terminal of the condenser and a test point leading up to a voltmeter is placed upon the other contact point. If current flow is indicated on the meter, there is a short circuit. This operation is shown in illustration 8.

Generator armatures may be tested in much the same fashion as starter armatures except that the current is supplied by a pair of test points rather than directly through the brushes. This test is carried on in a growler, which is the machine shown in illustration 9, mounted on the side of the test table.

Something more than a single spark test is required to determine whether or not a coil is in good enough condition to operate on an engine. A coil is mounted in a stand, connected to a pair of breaker points, the high tension lead is extended to spark gap, as indicated in illustration 10. The strength of a spark depends, of course, upon the voltage of the current and this is noted in the meter shown in illustration No. 11. With a fixed voltage and a known breaker point, the only variable in the spark is the coil itself.

Electrical tests illustrated in this article were made in the shop of W. L. Black Implement Co., International Harvester dealer, Hammonton, N. J., by courtesy of Theodore Forster, service manager.

Good Roads Pave Way For Dance of Billions

CONTINUED FROM PAGE 52

ing, Durak brake shoe liners, clutch facing, Rusco clutch spider, riveting and brake relining machines, brake drum lathes and grinders. Curtis Pneumatic Machinery Co. will exhibit its new line of Curtis Model C High Speed portable compressors, as well as a small gasoline engine-driven air compressor outfit, a hydraulic washer and an electric-driven compressor outfit for service stations and repair shops. Included in the exhibits of the Linde Air Products Co. will be Prest-O-Lite floodlight attachments, oxweld equipment and specimens of steel weld and bronze weld cast-iron.

Lycoming Splits 130 Hp. Eight Ways

CONTINUED FROM PAGE 29

main bearings and the camshaft in six bronze bearings. Intake valves are of chrome-nickel steel and exhaust of silchrome. The valve lift is 11/32 in. and a quieting curve is used on the cams to eliminate tappet noise.

Valve tappets are of conventional mushroom design and operate through four clusters of four tappets each, which bolt to the cylinder block.

Connecting rods are of I-beam section—carry cast-iron pistons fitted with four rings, two compression and two oil. One-inch piston pins are clamped rods. Front-end drive is by a four-gear train. The crankshaft and generator gears are of steel, and the camshaft and idler gears are cast-iron. The gear face is 1½ in. wide.

Lubrication is by pressure to all main, camshaft and connecting-rod bearings. All oil passages are drilled in the crankcase and in the crankcase webs. The oil pump, located in the oil sump, is driven from the camshaft by spiral gears. Oil passes from the pump through a drilled passage in the crankcase to the oil filter and, returning to the main oil distributing tube, it runs the full length of the crankcase. Drilled passages in the crankcase webs carry the oil under pressure from the main oil distributing tube to the main and camshaft bearings. Oil under pressure to the front-end gears is obtained through a drilled passage from the front main bearing to the idler-gear bearing. The lower connecting-rod bearings are lubricated through passages drilled in the crankshaft from the main bearings. Cylinder walls and the entire valve mechanism are lubricated by spray through small jet holes drilled in the lower connecting-rod bearings which register with the holes drilled in the crankshaft once during every revolution of the crankshaft. The oil-pressure regulator, which is adjustable, is located at the bottom of the oil pump and is permanently set at the factory.

The flywheel housing is No. 3 S.A.E. with provision for an S.A.E. No. 1 flange-type, outboard, starting motor. The generator is located on the left forward side of the engine. The mounting is standard S.A.E. flange-type and is driven at 1½ crankshaft speed. The distributor is driven from the camshaft by spiral gears and is a standard S.A.E. type "B" mounting. The rotation is counter-clockwise when viewed from the top. A pad for fuel pump is provided on the right side of the engine opposite No. 7 cylinder.

IT'S HERE!



EXPRESS
SPEED

CARLOAD
CAPACITY

SUPER
POWER

MULTI-
TRACTION

UNEQUALED
PERFORMANCE

HAULING
PROFIT

RELAY

DUO-DRIVE 300A

WORLD'S MOST
POWERFUL TRUCK



Relay's Dual Engine Six-Wheeler Opens a New Era in Heavy Duty Trucking Performance and Economy

POWER—More than 270 horse power for handling maximum loads at higher average speeds over any roads or grades.

RELAY DRIVE—Each engine drives to a separate Relay rear axle, eliminating the troublesome power connection between axles common to other six-wheel trucks.

SPEED—Latest truck type straight 8 engines governed at 2800 R.P.M. with optional gear ratios permitting any desired road speed.

RELAY TRACTION—With extraordinary power available, Relay's multiplied traction in starting due to the oscillation of the axles, assumes new importance.

BRAKES—Heavy duty air brakes with cast brake drums and molded brake blocks on all six wheels with air connections for trailers. Twin emer-

gency brakes equipped with booster offer adequate factor of safety.

RELAY SUSPENSION—Because of Relay's pendulum suspension, riding qualities are greatly improved. The horizontal impact is avoided on all rear wheels, a development never before attained in any Six-Wheeler.

FLEXIBILITY—Either or both engines may be operated as hauling conditions require. Two simple movements from the driver's seat connect or disconnect either engine.

ACCELERATION—Through its abundance of power, this unit establishes a new standard for heavy duty truck acceleration.

DEPENDABILITY—Because of its dual power unit and independent rear axles, this Relay is doubly dependable.

TWO STRAIGHT 8 ENGINES-POWER SHIFT BO

MAXIMUM POWER, SPEED, SAFETY, TRACTION & CAPACITY

ECONOMY—When traveling light or with no payload, the truck operates on one engine which affords definite savings in fuel and oil. Tire economy with the Relay suspension has been proven in numerous tests and through the actual experience of hundreds of Relay users.

TIRES—Balloon tires of either 22" or 24" diameter which have proven most economical in bus operation throughout the country will assure satisfactory tire performance at all speeds.

PERFORMANCE—Heavy duty hauling of maximum legal loads on schedule time with safety is an assured possibility with the Relay unit of this latest type.

HIGHWAY PROTECTION—Six-wheel trucks save the highways—actual government tests by the Federal Bureau of Public Roads prove unquestionably that six-wheel vehicles reduce the damaging impacts on the highways one-half and with the additional Relay cushioning, these blows on the road, truck and load are lessened to an even greater extent.

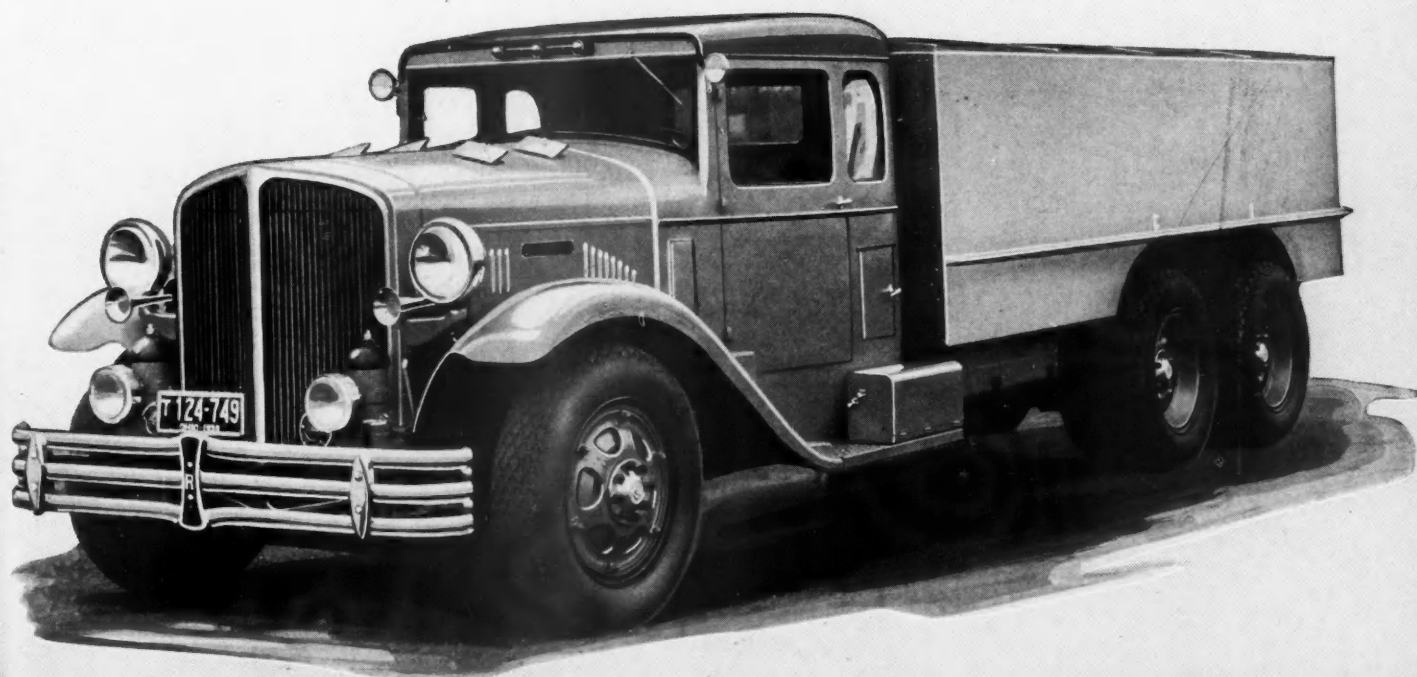
CAB COMFORT—Driver cooperation is assured through the utmost comfort offered by fully adjustable driver's seat, ease of operating all controls, and sleeping accommodations for long hauls.

STEERING EASE—Hydraulic booster eliminates all steering strain and without regard to load, no effort is required to turn the steering wheel. Normal manual steering always available if booster inoperative assuring safety.

LIGHTNESS—Strong aluminum alloys have been used throughout the chassis to reduce dead weight.

FUEL CAPACITY—Very ample gasoline tank capacity has been provided to eliminate loss of time and added cost of fueling en route.

PROFIT—Greater economies and larger profits are immediately available in motor truck operation provided heavier loads may be transported at higher average speed with ease and safety by a single driver. To meet just this demand the Relay dual engine six-wheeler is offered to the heavy duty truck operator.

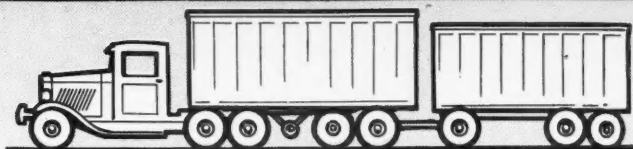


HYDRAULIC BOOSTER STEERING-6 WHEEL AIR BRAKES

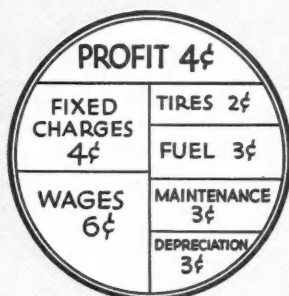
TRIPLED LOADS MEAN DOUBLED PROFIT



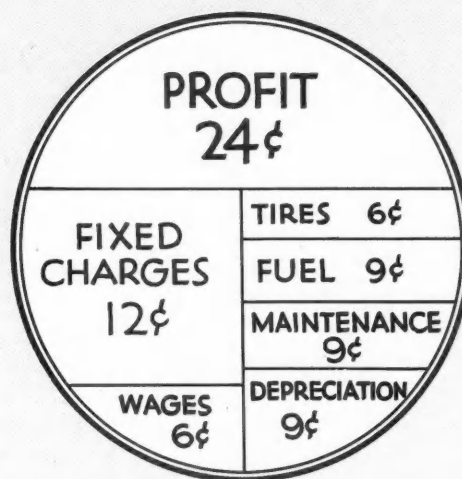
30,000 lbs. Gross



90,000 lbs. Gross



Sale Price 25c
Per Mile Per Trip



Sale Price 75c
Per Mile Per Trip

PROFIT	16%
WAGES	24%
FIXED CHARGES	16%
TIRES 8%	
FUEL 12%	
MAINT. 12%	
DEPREC. 12%	

PROFIT 16%

Percentage

PROFIT	32%
WAGES 8%	
FIXED CHARGES 16%	
TIRES 8%	
FUEL 12%	
MAINTENANCE 12%	
DEPRECIATION 12%	

PROFIT 32%

Percentage

The Profit Percentage Is Doubled When Higher Pay Loads Are Hauled Per Trip Behind The Single Driver With This Revolutionary New Relay.

YES-

Send me complete information about this revolutionary new motor truck, particularly about the two engines and the two separately driven rear axles:

Name _____ Title _____

Firm Name _____

Address _____ City _____ State _____

Send me detailed information about the Relay Line, 1 to 10 tons capacity.

Capacity _____

**RELAY
MOTORS
CORP.**

TRUCKS AND BUSES
1 TO 10 TON CAPACITY

LIMA, OHIO

COMMERCIAL CAR JOURNAL

TABLE OF TRUCK SPECIFICATIONS

Corrected Each Month From Data
Supplied Direct by Manufacturers

(KEY TO REFERENCES ON PAGE 80)

GENERAL MOTORS TRUCK has changed listing of its models as they appeared last month. Both tonnage classification and range of tonnage for each basic model should be noted as listed in tables this month.

Atterbury lists a series of eight models, ranging in capacity from 1500 lb. to 5 tons, in this issue. Chevrolet 1½-ton dual rear tire models in standard and long wheelbases appear for the first time. Other models added to specifications in this issue include:

Fageol; 101 1½-ton.
Fisher-Standard; BX 1-ton, Spec. X 1½-ton, 10AX 2-ton.
Chicago; 176C 10-ton tractor-truck.
Gramm; CX4 2-ton.
Maccar; 66A 4-ton.
Studebaker; S1 1000-lb., S4 tractor-truck.

Gentlemen,
Here's to You!...



F. M. Higgins, Research Dept., The Four
Wheel Drive Auto Co., Clintonville, Wis.



C. R. Chrisman, Chief Engineer, Gramm-
Bernstein Corporation, Lima, Ohio



George E. Schoelkopf, Engineer, Clin-
ton Motors Corporation, Reading, Pa.



Guy D. Hawley, Plant Manager, Greenville
Mfg. Works (Omort Truck), Greenville, Ohio

The unquestioned trust which the truck industry places in this Table of Truck Specifications is due to the splendid collaboration of men at the factories who each month correct the statistical data and keep it up-to-date. For their valued cooperation in making the data authentic the Commercial Car Journal makes this acknowledgment of gratefulness and knows that those who make use of the Table will join in saying: "Gentlemen, here's to you!" (Next month the tribute will be extended to another group of collaborators.)

Line Number	Make, Model and Capacity	General			Tire Size		Engine										Fuel System		Electrical System		Line Number						
		Chassis Price	Standard W.B.	Max. W.R. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make		Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make		
1000 Pounds																											
1	Chevrolet, Ind. Com.	355	109	109	4000	1880	B 4.75/19	B 4.75/19	Ow	6-3 1/2 x 3 1/2	194.0	26.3	50-2600	H	G	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	1	
2	Dodge Bros., UF-10	435	109	109	4025	1855	B 5.00/19	B 5.00/19	Ow	6-3 1/2 x 3 1/2	196	21.0	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	2	
3	Dodge Bros., F-10	515	109	109	4125	1960	B 5.25/19	B 5.25/19	Ow	6-3 1/2 x 3 1/2	189.8	23.4	61-3400	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	3	
4	Fargo Packet	595	105	105	4125	1935	B 5.00/19	B 5.00/19	Ow	6-3 1/2 x 3 1/2	189.8	23.4	61-3400	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	4	
5	Ford, A	345	103	103	3800	1880	B 4.75/19	B 4.75/19	Ow	6-3 1/2 x 3 1/2	200.5	24.0	40-2200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	5	
6	(X) Gen. Mot. T11	625	109	109	3800	1980	B 5.00/19	B 5.00/19	Ow	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	6	
7	Reo, Jr. 15	785	115	115	4000	2150	B 5.00/18	B 5.00/18	Con 19E	6-3 1/2 x 3 1/2	214.7	27.3	60-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	7	
8	Rugby	614	114	114	4000	2150	B 5.00/19	B 5.00/19	Con 22-A	6-3 1/2 x 3 1/2	199.0	25.3	58-3100	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	8	
9	Studebaker	81	114	114	4285	2330	B 5.25/19	B 5.25/19	Ow	6-3 1/2 x 3 1/2	221.2	27.3	70-3200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	9	
10	Whippet	96A	380	103	3500	1665	B 4.75/19	B 4.75/19	Ow 98A	6-3 1/2 x 3 1/2	145.7	15.6	40-3200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	10	
11	Willis Six	98B	525	110	3700	1904	B 5.00/19	B 5.00/19	Ow 98A	6-3 1/2 x 3 1/2	193.0	25.3	65-3400	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	11	
1500 Pounds																											
12	Dodge Brother	695	124	124	4760	2260	B 5.50/20	B 5.50/20	Ow	4-3 1/2 x 4 1/2	175.4	21.0	45-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	12	
13	Dodge Brothers	745	124	124	4760	2380	B 5.50/20	B 5.50/20	Ow	4-3 1/2 x 4 1/2	174.7	21.0	45-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	13	
14	Dodge Brothers	795	124	124	4860	2360	B 5.50/20	B 5.50/20	Ow	4-3 1/2 x 4 1/2	208.0	27.3	63-3200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	14	
15	Dodge Brothers	845	124	124	4860	2480	B 5.50/20	B 5.50/20	Ow	4-3 1/2 x 4 1/2	208.0	27.3	63-3200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	15	
16	Fargo Clipper	725	120	120	4600	2340	B 5.50/18	B 5.50/18	Ow	4-3 1/2 x 4 1/2	195.6	23.4	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	16	
17	Fisher Standard Jr. B.	120	120	120	6000	2650	B 5.50/20	B 5.50/20	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	17	
18	Fisher Standard Jr. B.	120	120	120	6000	2650	B 5.50/20	B 5.50/20	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	18	
19	(X) Gen. Mot. T15	645	130	141	6500	2625	B 5.50/20	B 5.50/20	Ow	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	19	
20	Internat'l. Spec. Del	124	124	124	6500	2200	B 5.25/20	B 5.25/20	Wau XA	4-3 1/2 x 4 1/2	173.0	19.6	30-2700	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	20	
21	International, A-W-1	136	136	136	6500	2620	B 5.25/20	B 5.25/20	Wau XA	4-3 1/2 x 4 1/2	173.0	19.6	30-2700	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	21	
22	Palge	860	115	115	4930	2465	B 5.50/19	B 5.50/19	Ow	6-3 1/2 x 4 1/2	224	25.3	76-3400	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	22	
23	Relay	1370	131	131	4930	3750	B 5.50/19	B 5.50/19	Con 17E	6-3 1/2 x 4 1/2	214.7	27.3	52-2200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	23	
1 Ton																											
24	Aeae	17	1060	136	6400	3100	P 30x5	P 30x5	Con 29L	6-2 1/2 x 4 1/2	185.0	19.8	44-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	24	
25	Atterbury	132	145	145	3960	3400	P 30x5	P 30x5	Lyc WTG	6-2 1/2 x 4 1/2	201.4	21.6	44-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	25	
26	Available	Op	Op	Op	9000	4000	P 30x5	P 30x5	Con 18E	6-3 1/2 x 4 1/2	215.0	27.3	61-2900	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	26	
27	Brookway	60	152	144	6000	3200	P 30x5	P 30x5	Con 16C	6-3 1/2 x 4 1/2	248.2	27.3	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	27	
28	Brookway	60	152	144	6000	3200	P 30x5	P 30x5	Con 16C	6-3 1/2 x 4 1/2	248.2	27.3	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	28	
29	Commerce	8-11	1600	142	6000	3900	P 30x5	P 30x5	Bud H86	6-3 1/2 x 4 1/2	241.6	27.3	52-2200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	29	
30	Day Elder	60	1195	125	6000	3200	B 6.00/20	B 6.00/20	Bud H86	6-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	30	
31	Diamond T.	200	785	128	6500	3050	P 30x5	P 30x5	Bud H199	6-3 1/2 x 4 1/2	198.8	22.5	57-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	31	
32	Diamond T.	215	885	135	6500	3150	P 30x5	P 30x5	Bud J214	6-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	32	
33	Douglas	65	1095	135	7500	3075	P 30x5	P 30x5	Bud J214	6-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	33	
34	Fargo Freight	795	144	162	7500	2725	B 6.00/20	B 6.00/20	Ow	6-3 1/2 x 4 1/2	189.8	23.4	61-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	34	
35	Fisher Standard, 10A	120	128	128	6000	3000	B 5.50/20	B 5.50/20	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	35	
36	Fisher Standard, BX	120	128	128	6000	3000	B 5.50/20	B 5.50/20	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	36	
37	Garford	8-11	1600	142	6500	3900	P 30x5	P 30x5	Bud H86	6-3 1/2 x 4 1/2	241.6	27.3	52-2200	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	37	
38	(X) Gen. Mot. T15 or T17	675	130	141	6500	2670	B 5.50/20	B 5.50/20	Ow	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	38	
39	Gramm	8-11	1600	142	6500	3900	P 30x5	P 30x5	Con W-10	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	39	
40	Gramm	8-11	1600	142	6500	3900	P 30x5	P 30x5	Con W-10	6-3 1/2 x 3 1/2	200.3	26.3	58-3000	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	40	
41	Gramm-Bernstein, 10H	129	146	146	7000	3100	B 6.00/20	B 6.00/20	Lyc CT	4-3 1/2 x 5	220.9	22.5	43-2350	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	41	
42	Hahn	70	124	124	6500	3100	P 30x5	P 30x5	Con 29L	6-2 1/2 x 4 1/2	185.0	19.8	44-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	42	
43	Indiana	60	132	141	6000	3200	P 30x5	P 30x5	Lyc WTG	6-2 1/2 x 4 1/2	201.4	21.6	44-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	43	
44	Indiana	64	137	149	6500	3400	P 30x5	P 30x5	Lyc WTG	6-2 1/2 x 4 1/2	201.4	21.6	44-2800	L	L	C	2 1/2	6 1/2	3	PG	No	Car	P	D-R	D-R	44	
45	Int. 6 Sp. Spec.	124	124	124	6500	3000	B 5.50/20	B 5.50/20	Con 16C																		

Line Number	Radiator Make	Clutch	Gear Set	Make and Model	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universal Make and No.	Rear Axle				Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number		
									Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front			Rear	
																										Reduc. in High	Reduc. in Low	Make and Model
1	Har Fed	P.Own	Own Ind.	Own Ind.	U	3	No	Own 2	Own Int.	S	H	4.1	13.6	Own Ind.	O41M	101	21	Own	5x2 1/2 x 5 1/2	C	53 1/2	28 1/2	42 1/2	36 1/2	54 1/2	1
2	Fed	P.B&B	Own	Own	U	3	No	Own	Own	S	H	4.6	14.3	Own	L41H	114	TX	War	5x1 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	2
3	Own	D.Own	Own	Own	U	3	No	Own	Own	S	H	4.7	14.3	Own	O41M	200	41	Jac	5x2 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	3
4	Own	P.Own	Pontiac	Own	U	3	No	M.M.	Pontiac	S	H	4.7	14.7	Sal	L41H	141	TX	Ros	6x2 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	30 1/2	54 1/2	4
5	Har	P.B&B	War	Own	U	3	No	Spl	Adams	S	H	4.7	15.6	Adams	S41M	178	41	War	5 1/2 x 2 1/2	C	52 1/2	26	43 1/2	36 1/2	55 1/2	5
6	McC	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.73	15.2	Own	B41M	148	41	Ros	5 1/2 x 2 1/2	C	52 1/2	26	43 1/2	36 1/2	55 1/2	6
7	McC	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.73	15.2	Own	B41M	148	41	Ros	5 1/2 x 2 1/2	C	52 1/2	26	43 1/2	36 1/2	55 1/2	7
8	Fed	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.6	13.4	Own	B41M	138	41	Own	4 1/2 x 1 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	8
9	Fed	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.6	13.4	Own	B41M	147	41	Own	4 1/2 x 1 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	9
10	Fed	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.6	13.4	Own	B41M	147	41	Own	4 1/2 x 1 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	10
11	Fed	P.B&B	W-G	Own	U	3	No	M.M.2	Own	S	H	4.6	13.4	Own	B41M	147	41	Own	4 1/2 x 1 1/2 x 5 1/2	C	53 1/2	26 1/2	42 1/2	35 1/2	53 1/2	11
12	Fed	P.B&B	W-G	Own	U	3	No	Spl	Own	S	H	5.63	212	Own	L41H	189	TX	Han	6x2 1/2 x 5 1/2	C	66 1/2	31	37 1/2	39 1/2	48 1/2	12
13	Fed	P.B&B	W-G	Own	U	3	No	Spl	Own	S	H	5.63	212	Own	L41H	189	TX	Han	6x2 1/2 x 5 1/2	C	66 1/2	31	37 1/2	39 1/2	48 1/2	13
14	Fed	P.B&B	W-G	Own	U	3	No	Spl	Own	S	H	5.63	212	Own	L41H	189	TX	Han	6x2 1/2 x 5 1/2	C	66 1/2	31	37 1/2	39 1/2	48 1/2	14
15	Fed	P.B&B	W-G	Own	U	3	No	Spl	Own	S	H	5.63	212	Own	L41H	189	TX	Han	6x2 1/2 x 5 1/2	C	66 1/2	31	37 1/2	39 1/2	48 1/2	15
16	Own	D.Own	Own	Own	U	3	No	Own	Own	S	H	4.9	15.5	Own	L41H	362	TX	Ros	6 1/2 x 2 1/2 x 5 1/2	C	84	47 1/2	32	40 1/2	54 1/2	16
17	Own	P.Own	W-G T-9	Own	U	4	No	Blo 2	Sal F	S	H	5.37	34.4	Sal F	L41H	362	TX	Ros	6 1/2 x 2 1/2 x 5 1/2	C	84	47 1/2	32	40 1/2	54 1/2	17
18	Lon	P.B&B	B-L 214	Own	U	4	No	M.M.	Tim 51500	SF	H	4.86	16.1	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	84	47 1/2	32	40 1/2	54 1/2	18
19	Lon	P.B&B	B-L 214	Own	U	4	No	M.M.	Tim 51500	SF	H	4.86	16.1	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	84	47 1/2	32	40 1/2	54 1/2	19
20	Lon	P.B&B	B-L 214	Own	U	4	No	M.M.	Tim 51500	SF	H	4.86	16.1	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	84	47 1/2	32	40 1/2	54 1/2	20
21	Mod	Roc	MM-O	Own	U	3	No	M.M.4	Own 600	S	H	4.45	17.2	Eat 200F	BE41M	256	21	Ros	4 1/2 x 1 1/2 x 5 1/2	C	96 1/2	50 1/2	32	40 1/2	52 1/2	21
22	Lon	P.Own	W-G T-71	Own	U	3	No	U-P 2	Sal M	S	H	4.9	17.4	Sal	41H	187	TX	Ros	5 1/2 x 1 1/2	C	93 1/2	53 1/2	32	40 1/2	52 1/2	22
23	Lon	P.B&B	W-G T-9	Own	U	4	No	Blo	Own	S	H	6.00	38.4	Col 5540	L41H	297	FX	Han	6x2 1/2 x 5 1/2	C	96	55	34	36 1/2	48 1/2	23
24	Per	P.B&B	Ful	Tim 52200H	U	4	No	Blo 3	Tim 52200H	BF	H	5.83	35.9	Tim 11703	L41H	380	TX	Ros	4 1/2 x 3 1/2 x 5 1/2	C	108	58	33	37 1/2	50 1/2	24
25	Fed	P.B&B	War T9	Tim 51000H	U	4	No	Blo	Tim 52200H	SF	H	5.83	37.9	Shu 5429	L41H	424	TX	Ros	5 1/2 x 3 1/2 x 5 1/2	C	96	53 1/2	34	38 1/2	50 1/2	25
26	You	D.B-L	B-L 214	Col	U	4	No	Spl 2	Col	S	H	5.59	19.8	Col	B41M	297	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	90	52 1/2	34	37 1/2	52 1/2	26
27	G&O	P.B&B	War	Col	U	3	No	Spl 2	Col	S	H	5.59	19.8	Col	B41M	297	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	90	52 1/2	34	37 1/2	52 1/2	27
28	G&O	P.B&B	War	Col	U	3	No	Spl 2	Col	S	H	5.59	19.8	Col	B41M	297	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	90	52 1/2	34	37 1/2	52 1/2	28
29	G&O	P.B&B	War	Col	U	3	No	Spl 2	Col	S	H	5.59	19.8	Col	B41M	297	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	90	52 1/2	34	37 1/2	52 1/2	29
30	Lon	P.B&B	B-L 20	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	30
31	G&O	P.B&B	W-G T-9	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	31
32	G&O	P.B&B	W-G T-9	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	32
33	Mod	P.B&B	W-G T-9	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	33
34	Own	P.B&B	W-G T-9	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	34
35	Lon	P.B&B	B-L 214	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	35
36	Lon	P.B&B	B-L 214	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	36
37	Lon	P.B&B	B-L 214	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	37
38	Lon	P.B&B	B-L 214	Col 54028	U	4	No	Spl	Col 54028	SF	H	5.12	25.5	Col 5530	L41H	241	TX	Ros	5 1/2 x 2 1/2 x 5 1/2	C	103 1/2	63	34	36 1/2	48 1/2	38
39	Per	D.Own	W-GTA	Col 54028	U	4	No	Blo	Tim 51505	SF	H	4.83	16.0	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	81 1/2	51 1/2	34	36 1/2	45 1/2	39
40	Per	D.Own	W-GTA	Col 54028	U	4	No	Blo	Tim 51505	SF	H	4.83	16.0	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	81 1/2	51 1/2	34	36 1/2	45 1/2	40
41	Per	D.Own	W-GTA	Col 54028	U	4	No	Blo	Tim 51505	SF	H	4.83	16.0	Tim 11709	B41M	308	41	Jac	6x2 1/2 x 5 1/2	C	81 1/2	51 1/2	34	36 1/2	45 1/2	41
42	G&O	P.B&B	W-G	Col 54028	U	4	No	Blo	Tim 52200H	BF	H	5.83	35.9	Tim 11703	L41H	380	TX	Ros	4 1/2 x 3 1/2 x 5 1/2	C	108	58	33	37 1/2	50 1/2	42
43	G&O	P.B&B	W-G	Col 54028	U	4	No	Blo	Tim 52200H	BF	H	5.83	35.9	Tim 11703	L41H	380	TX	Ros	4 1/2 x 3 1/2 x 5 1/2	C	108	58	33	37 1/2	50 1/2	43
44	Lon	P.B&B	War	Col 54028	U	4	No	Spl 2	Col	S	H	5.59	19.8	Col	B41M	297	TX	Ros	5 1/2 x 2 1/2 x 5							

Line Number	Make, Model and Capacity	General		Tire Size		Make and Model	Engine										Fuel System		Electrical System		Line Number				
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)		Chassis Wt. (Stripped)	Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make
1 1/2 Ton—Cont'd																									
1	Gramm.....BX-6	995	131	157	10000	3300 B 6.00/20	DB6.00/20	Con 25A	6-3 1/4 x 4 1/4	214.7	27.3	61-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	1	
2	Gramm-Bernstein.....J	146	146	9200	3980 B 6.50/20	DB6.50/20	Bud J-214	6-3 1/4 x 4 1/4	214.0	27.3	62-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	2		
3	Hahn.....17 H	142	142	7900	3750 P 32x6	P 32x6	Con 18E	6-3 1/4 x 4 1/4	214.7	27.3	66-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	3		
4	Hahn.....317H	142	142	7900	3900 P 32x6	P 32x6	Con 16C	6-3 1/4 x 4 1/4	248.2	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	4		
5	Indiana.....111	129	165	9000	3600 P 30x5	P 32x6	Her	4-4 x 5	251.3	25.6	46-2000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	5		
6	Indiana.....89	149	168	9000	3650 P 32x6	P 32x6	Con	6-3 1/4 x 4 1/4	248.2	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	6		
7	International.....AW-2	136	136	9000	2980 B 5.50/20	B 6.00/20	Wau XA	6-3 1/4 x 4 1/4	221.0	22.5	43-2350 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	7		
8	International.....SL-34	160	160	9000	3595 P 30x5	P 30x5	Lyc CT	4-3 1/4 x 5	221.0	22.5	43-2350 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	8		
9	International.....SF-34	140	160	9000	3520 P 30x5	P 32x6	Lyc CT	4-3 1/4 x 5	221.0	22.5	43-2350 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	9		
10	International.....SL-36	160	160	9000	3645 P 30x5	P 30x5	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2800 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	10		
11	International.....SF-36	140	160	9000	3570 P 30x5	P 32x6	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2800 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	11		
12	International.....AL-3	138	164	10000	4890 B 5.50/20	DB6.00/20	Lyc 4SLH	6-3 1/4 x 4 1/4	224.0	25.3	61-2800 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	12		
13	Kenworth.....100	1995	164	182	10000	4200 P 30x5	DP30x5	Bud H260	6-3 1/4 x 4 1/4	214.7	27.3	61-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	13	
14	Kleiber.....52	1500	152	158	7500	3000 P 32x6	P 32x6	Con	6-3 1/4 x 4 1/4	214.7	27.3	61-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	14	
15	LaFrance-Republic C-1	144	175	7500	3650 B 6.00/20	P 32x6	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2750 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	15		
16	Lange.....R	2225	140	172	9300	4600 P 32x6	P 32x6	Her WXB	6-3 1/4 x 4 1/4	228.0	33.7	67-2400 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	16	
17	Larrabee.....25	1945	152	161	9375	4200 B 7.00/20	B 7.00/20	Con 16C	6-3 1/4 x 4 1/4	248.2	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	17	
18	LeMoon.....HB17	2000	163	190	10000	3700 B 6.50/20	P 32x6	Con	6-3 1/4 x 4 1/4	248.2	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	18	
19	Maccar.....36200	1950	154	182	10100	4800 P 32x6	DP32x6	Bud HS	6-3 1/4 x 4 1/4	241.6	31.5	65-2400 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	19	
20	Mack.....BG	3000	138	192	9000	3200 P 32x6	DP32x6	Own BG	6-3 1/4 x 5	309.6	31.5	56-2000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	20	
21	Relay.....40	2990	168	192	9000	5300 P 34x5	DP34x5	Bud DS 6	6-3 1/4 x 5	309.6	31.5	56-2000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	21	
22	Relay.....S 11	1900	162	192	9000	4500 P 30x5	DP30x5	Bud HS 6	6-3 1/4 x 4 1/4	241.6	27.3	52-2200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	22	
23	Reo.....FA-137	1295	137	9000	3525 B 6.50/20	P 32x6	Own	6-3 1/4 x 5	268.3	27.3	70-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	23		
24	Reo.....FE	1395	152	9000	3700 B 6.50/20	P 32x6	Own	6-3 1/4 x 5	268.3	27.3	70-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	24		
25	Reo.....FF	1395	156	9000	3750 B 6.50/20	P 32x6	Own	6-3 1/4 x 5	268.3	27.3	70-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	25		
26	Rugby.....6-15	930	135	145	7150	3000 B 5.50/20	DP30x5	Con 22A	6-3 1/4 x 4	199.0	25.3	58-3100 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	26	
27	Schacht.....De Luxe 15	160	174	8800	4100 B 7.50/20	P 32x6	Con 16C	6-3 1/4 x 4 1/4	248.2	27.3	65-2600 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	27		
28	Selden.....17	142	142	7900	3750 P 32x6	P 32x6	Con 18E	6-3 1/4 x 4 1/4	214.7	27.3	61-3000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	28		
29	Selden.....317	142	142	7900	3750 P 32x6	P 32x6	Con 16C	6-3 1/4 x 4 1/4	248.2	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	29		
30	Service.....40	2990	168	192	9000	4700 P 34x5	DP34x5	Bud DS 6	6-3 1/4 x 5	309.6	31.5	56-2000 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	30	
31	Service.....S11	1900	162	192	9000	4300 P 30x5	DP30x5	Bud HS 6	6-3 1/4 x 4 1/4	241.6	27.3	52-2200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	31	
32	Sterling.....DB7-64	137	150	7000	3355 P 32x6	P 32x6	Con 18E	6-3 1/4 x 4	214.7	27.3	57-2500 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	32		
33	Stewart.....40	895	130	160	9000	3215 B 6.50/20	DB6.50/20	Lyc AFE	4-3 1/4 x 4 1/4	199.0	22.5	50-2600 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	33	
34	Stewart.....40X	995	130	160	9000	3250 B 6.50/20	DB6.50/20	Lyc	6-3 1/4 x 4 1/4	201.5	21.6	60-2800 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	34	
35	Stewart.....34X	1195	176	9000	3900 P 32x6	DP32x6	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2600 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	35		
36	Studebaker.....S-20	695	130	160	7535	2985 B 6.00/20	P 32x6	Own	6-3 1/4 x 4 1/4	205.4	25.4	70-3200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	36	
37	White.....20A	2125	145	168	10500	4572 P 34x5	DP34x5	Own GKA	4-3 1/4 x 5	226.4	22.5	31-1600 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	37	
38	White.....61	2450	148	196	10500	4789 P 30x5	DP30x5	Own 4A	6-3 1/4 x 4 1/4	299.0	33.7	61-2100 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	38	
39	Wichita.....6-21	2600	160	Op	11000	5450 P 32x6	DP32x6	Wau 6XK	6-3 1/4 x 4 1/4	298.0	33.7	64-2200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	39	
40	Willis-Knight.....T-103	825	131	161	7000	2848 B 5.50/20	P 30x5	Own 87	6-2 1/4 x 4 1/4	177.9	20.7	55-3000 S	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	40	
41	Willis-Six.....C-10	695	131	131	7000	2740 B 5.50/20	P 30x5	Own 98B	6-2 1/4 x 4 1/4	194.0	25.3	50-2200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	41	
42	Witt-Will.....S15B	2100	147	10500	4500 P 30x5	DP30x5	Bud SA 8	6-3 1/4 x 4 1/4	255.3	28.9	50-2200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	42		
43	Witt-Will.....C15B	2200	158	10500	5170 P 30x5	DP30x5	Con 16C	6-3 1/4 x 4 1/4	248.2	27.3	66-3200 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	43		
1 3/4 Ton																									
44	Gramm.....B	1495	140	174	10000	3900 B 6.50/20	DB6.50/20	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2900 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	44	
45	Stewart.....28X	1495	136	176	9000	3958 B 6.50/20	B 6.50/20	Lyc 4SL	6-3 1/4 x 4 1/4	224.0	25.3	61-2600 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	45	
2 Ton																									
46	Acme.....47	2035	162	Op	10200	4800 P 32x6	DP32x6	Con 16C	6-3 1/4 x 4 1/4	248.3	27.3	65-2700 L	G	C	2 1/2	8 1/4	4	PC	No	Til	M	A-L	A-L	46	
47	Amer. LaF. Chief 9R	3650	180	Op	11500	6200 P 32x6	DP32x6	Own	6-3 1/4 x 5	331.0	33.7	65-2100 L	G	C	2 1/2	8 1/4									

Line Number	Radiator Make	Clutch	Gearset	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universal Make and No.	Make and Model	Final Drive and Type	Drive and Torque	Rear Axle		Front Axle		Brakes	Frame	Body Mounting Data	Springs	Auxiliary Type	Line Number										
											Gear Ratios	R.duc. in Low	Make and Model	Service							Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear
1	Per	D.Jon	W-G T9	U	4	No	Blo	Tim 52200H	SF	H 5.66	36.3	Tim 12703-H	L4IH	380	FD	Ros	6x2 1/2 x 1 1/2	11 1/2	34	36x2 1/2	45x2 1/2	1								
2	Chi	D.B-L	B-L 20	U	4	No	Blo	Tim 52200H	SF	H 5.83	37.4	Tim 11703H	L4IH	380	TX	Ros	6x2 1/2 x 1 1/2	11 1/2	34	42x2 1/2	50x2 1/2	2								
3	McC	P.B&B	B-L 35	U	4	No	Blo	Tim 52200H	SF	H 5.5	26.4	Shu	K2IM	432	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	11 1/2	34	41x2 1/2	50x2 1/2	3								
4	Chi	D.B-L	B-L 35	U	4	No	Blo	Tim 52200H	SF	H 5.12	20.8	Col	C4IM	291	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	11 1/2	34	36x2 1/2	50x2 1/2	4								
5	McC	P.B&B	B-L 35	U	4	No	Blo	Tim 52200H	SF	H 5.29	27.2	Own 100	BE4IM	292	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	11 1/2	34	40x2 1/2	54x2 1/2	5								
6	Lon	Roc	M.M.	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	6								
7	Lon	P.Own	Own	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	7								
8	Lon	P.Own	Own	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	8								
9	Lon	P.Own	Own	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	9								
10	Lon	P.Own	Own	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	10								
11	Lon	P.Own	Own	U	4	No	M.M.5	Eat 1502	SF	H 5.66	22.6	Eat 430 F	BE4IM	346	21	CAS	6 1/2 x 3 1/2 x 1 1/2	104	61	34x2 1/2	52x2 1/2	11								
12	Mod	P.Own	W-G T7	U	4	No	M.M.5	Own 800	SF	H 5.60	42.9	Own 200	B4IM	295	21	Ros	6 1/2 x 2 1/2 x 1 1/2	114	55	32x2 1/2	52x2 1/2	12								
13	Per	P.B-L	B-L 214	U	4	No	Spl	Tim 54200H	SF	H 5.83	37.4	Eat F 304	L4IH	290	TD	Ros	5 1/2 x 3 1/2 x 1 1/2	126	82	34x2 1/2	52x2 1/2	13								
14	Own	D.B-L	B-L 20	U	4	No	Spl	Tim 52200H	SF	H 5.36	35.8	Tim 12703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 1 1/2	100	64	38x2 1/2	52x2 1/2	14								
15	G&O	P.B&B	WO-BB	U	4	No	Spl 3	Tim 52200H	SF	H 5.36	35.8	Tim 11703H	L4IH	448	TX	Ros	5 1/2 x 3 1/2 x 1 1/2	100	64	38x2 1/2	52x2 1/2	15								
16	Mod	D.B-L	B-L 31	U	4	No	Spl 4	Tim 54000H	BF	R 5.83	20.8	Col 5530	L4IH	279	FD	Ros	6x2 1/2 x 1 1/2	111	62	38x2 1/2	57 1/2 x 1 1/2	16								
17	Per	D.B-L	B-L 214	U	4	No	Spl	Tim 52200H	BF	H 5.83	37.4	Tim 11703H	L4IH	452	TD	Ros	6x3 1/2 x 1 1/2	100	Opt	34x2 1/2	54x2 1/2	17								
18	Chi	D.B-L	B-L 214	U	4	No	Spl 3	Tim 54200H	BF	H 5.83	37.4	Tim 14703H	L4IH	380	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	128	81	34x2 1/2	50x2 1/2	18								
19	Per	D.B-L	B-L 214	U	4	No	Cle 3	Tim 54200H	BF	R 5.83	29.1	Tim 14703H	L4IH	380	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	128	81	34x2 1/2	50x2 1/2	19								
20	Own	D.Own	Own BG	U	4	No	Spl 4	Own BG	BF	H 4.90	24.2	Own BG	O4IV	354	FX	Own	7x3 1/2 x 1 1/2	116	54	33x2 1/2	54x3	20								
21	Lon	D.B-L	B-L 20	U	4	No	Spl	Own 30	BF	H 5.83	37.4	Tim 14704H	L4IH	394	TX	Han	6x3 1/2 x 1 1/2	144	90	34x2 1/2	50x3	21								
22	Lon	P.B-L	B-L 20	U	4	No	Blo	Own 20	2R	H 6.00	30.0	Col 5530	L4IH	297	FX	Han	6x3 1/2 x 1 1/2	144	90	34x2 1/2	50x3	22								
23	Own	D.B-L	Own	U	4	No	Cle	Own	SF	H 5.2	34.3	Own	L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	97	52	40x2 1/2	52x2 1/2	23								
24	Own	D.B-L	Own	U	4	No	Cle	Own	SF	H 5.2	34.3	Own	L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	97	52	40x2 1/2	52x2 1/2	24								
25	Own	D.B-L	Own	U	4	No	Cle	Own	SF	H 5.2	34.3	Own	L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	97	52	40x2 1/2	52x2 1/2	25								
26	Fed	D.B-L	B-L 20	U	4	No	Blo	Eat	BF	H 6.37	31.2	Eat	L4IH	452	TX	Ros	6x3 1/2 x 1 1/2	111	62	38x2 1/2	57 1/2 x 1 1/2	26								
27	Yon	D.B-L	B-L 35	U	4	No	Spl	Tim 54000H	BF	H 5.1	21.1	Tim 12703H	L4IH	452	TX	Ros	6x3 1/2 x 1 1/2	111	62	38x2 1/2	57 1/2 x 1 1/2	27								
28	Own	D.B-L	B-L 35	U	4	No	Blo	Tim	BF	H 5.1	21.1	Tim	L4IH	452	TX	Ros	6x3 1/2 x 1 1/2	111	62	38x2 1/2	57 1/2 x 1 1/2	28								
29	Own	D.B-L	B-L 35	U	4	No	Blo	Tim	BF	H 5.1	21.1	Tim	L4IH	452	TX	Ros	6x3 1/2 x 1 1/2	111	62	38x2 1/2	57 1/2 x 1 1/2	29								
30	Lon	D.B-L	B-L 35	U	4	No	Blo	Tim 63702	WF	H 5.6	34.8	Tim 14704H	L4IH	394	FX	Han	6x3 1/2 x 1 1/2	144	90	34x2 1/2	50x3	30								
31	Lon	P.B-L	B-L 20	U	4	No	Spl	Tim 54000H	SF	H 5.8	29.2	Col 5530	L4IH	297	FX	Han	6x2 1/2 x 1 1/2	133	63	34x2 1/2	48x2 1/2	31								
32	Per	P.B-L	B-L 20	U	4	No	Spl	Tim 52000H	SF	H 5.82	29.2	Tim 11703H	L4IH	219	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	104	63	34x2 1/2	50x2 1/2	32								
33	Fed	P.B&B	War	U	4	No	Spl	Tim 52000H	SF	H 5.82	29.2	Tim 11703H	L4IH	219	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	104	63	34x2 1/2	50x2 1/2	33								
34	Fed	P.B&B	War	U	4	No	Spl	Tim 52000H	SF	H 5.82	29.2	Tim 11703H	L4IH	219	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	104	63	34x2 1/2	50x2 1/2	34								
35	Own	P.B&B	War	U	4	No	Spl 3	Cla	BF	H 5.6	35.8	Cla	B4IM	...	TX	Ros	7 1/2 x 2 1/2 x 1 1/2	77	40	38x2 1/2	50x2 1/2	35								
36	McC	Lon	WGAS1-T9	U	4	No	Spl	Tim 53800	2 1/2	H 5.66	35.8	Tim30010-Ai	B4IM	224	...	Ros	6x2 1/2 x 1 1/2	104	63	34x2 1/2	50x2 1/2	36								
37	Own	P.Own	Own TBC	U	4	No	Spl 2	Own 20A	SF	R 6.9	32.1	Own 20A	O2XM	334	21	Own	5 1/2 x 3 1/2 x 1 1/2	106	59	34x2 1/2	48x2 1/2	37								
38	Own	P.Own	Own 5B	U	4	No	Spl 3	Own 70B	SF	H 5.67	34.3	Own 70B	L4IH	211	CX	Han	6 1/2 x 3 1/2 x 1 1/2	115	68	34x2 1/2	54x3	38								
39	Own	D.B-L	B-L 35	U	4	No	Spl	Own 30C	SF	H 5.67	34.3	Own 30C	O2IM	322	FX	Han	5 1/2 x 3 1/2 x 1 1/2	115	68	34x2 1/2	54x3	39								
40	Fed	P.Own	Cov	U	4	No	M.M.2	Cla	WF	H 6.37	42.9	Shu 3FA10	B4IM	332	...	Ros	7 1/2 x 2 1/2 x 1 1/2	86	37	30x2 1/2	50x3	40								
41	Fed	P.B&B	Cov	U	4	No	M.M.2	Cla	SF	H 6.37	42.9	Shu 3FA10	B4IM	332	...	Ros	7 1/2 x 2 1/2 x 1 1/2	86	37	30x2 1/2	50x3	41								
42	Fed	D.B-L	B-L 20	U	4	No	Spl	Tim 54000H	BF	H 5.8	36.3	Tim 14703	B4IM	232	AI	Own	6x2 1/2 x 1 1/2	86	37	30x2 1/2	50x3	42								
43	Per	D.B-L	B-L 20	U	4	No	Spl	Tim 54000H	BF	H 5.83	31.2	Tim 14703H	L4IH	...	TX	Ros	6x2 1/2 x 1 1/2	...	79	32	41x2 1/2	54x3	43							
44	Per	D.Own	Cov A4J	U	4	No	Blo	Tim 54000H	BF	H 5.83	37.1	Col 4003	L4IH	278	TX	Ros	6x2 1/2 x 1 1/2	94	60	34x2 1/2	50x2 1/2	44								
45	Own	D.Ful	Ful	U	4	No	Spl 3	Cla	SF	R 6.37	47.0	Col 4003	B4IM	...	TX	Ros	7 1/2 x 2 1/2 x 1 1/2	114	63	38x2 1/2	50x2 1/2	45								
46	Per	D.B-L	B-L	U	4	No	Blo	Tim 54200H	BF	R 6.8	22.4	Tim 14703H	L4IH	456	TX	Ros	6x3 1/2 x 1 1/2	132	82	34x2 1/2	54x2 1/2	46								
47	G&O	P.B&B	Own	U	4	No	Spl	Tim 65000BX	WF	H 6.0	28.5	Tim 14703BX	B4IM	450	TD	Ros	6 1/2 x 2 1/2 x 1 1/2	132	82	34x2 1/2	54x2 1/2	47								
48	Per	P.B&B	Cov FAB	U	4	No	Spl	Tim 54200H	BF	H 6.80	45.3	Tim 14703H	L4IH	456	TD	Ros	6 1/2 x 2 1/2 x 1 1/2	132	82	34x2 1/2	54x2 1/2	48								
49	Per	P.B&B	Cov W4C	U	4	No	Spl 400	Tim 54200H																						

Line Number	Make, Model and Capacity	General				Tire Size		Make and Model	Engine										Fuel System	Electrical System	Line Number					
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front		Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make
2 Ton—Cont'd																										
1	Pierce-Arrow.....FA	2450	140	180	3855	S 32x6	S 34x7	Own FA	6-3 1/2 x 5 1/2	288	6	29.4	56-2000	L	CC	CC	2 1/2	7 1/2	7	FP	No	Str	V	D-R	D-R	1
2	Relay.....51	2030	162	185	5500	P 36x6	DP36x6	Bud DS6	6-3 1/2 x 5 1/2	309	6	31.5	52-2200	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	2
3	Relay.....S11	2030	162	185	4700	P 32x6	DP32x6	Bud HS6	6-3 1/2 x 5 1/2	241	6	27.3	52-2200	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	3
4	Relay.....50	3860	161	180	6800	P 36x6	DP36x6	Bud DW6	6-3 1/2 x 5 1/2	331	6	33.7	73-2700	L	CC	CC	3	13 1/2	4	FP	No	Str	V	D-R	D-R	4
5	Reo.....FC	1645	152	160	4025	P 32x6	DP32x6	Own	6-3 1/2 x 5 1/2	268	3	27.3	70-3000	L	CC	CC	2 1/2	12	4	FP	No	Str	V	D-R	D-R	5
6	Reo.....FD	1745	168	180	4075	P 32x6	DP32x6	Own	6-3 1/2 x 5 1/2	268	3	27.3	70-3000	L	CC	CC	2 1/2	12	4	FP	No	Str	V	D-R	D-R	6
7	Reo.....FH	1545	162	180	4165	P 32x6	DP32x6	Own	6-3 1/2 x 5 1/2	268	3	27.3	70-3000	L	CC	CC	2 1/2	12	4	FP	No	Str	V	D-R	D-R	7
8	Schacht De Luxe.....20	160	174	180	4500	B 7.50/20	DB 7.50/20	Con 16C	6-3 1/2 x 5 1/2	309	6	31.5	56-2000	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	8
9	Selden.....Unit 37	311	151	181	4700	P 32x6	DP32x6	Con 16C	6-3 1/2 x 5 1/2	241	6	27.3	56-2000	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	9
10	Service.....31	2030	162	185	4700	P 36x6	DP36x6	Bud DS6	6-3 1/2 x 5 1/2	309	6	31.5	56-2000	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	10
11	Service.....S11	2030	162	185	4500	P 32x6	DP32x6	Bud HS6	6-3 1/2 x 5 1/2	241	6	27.3	52-2200	L	CC	CC	2 1/2	7 1/2	4	FP	No	Str	V	D-R	D-R	11
12	Sterling.....DB9-64	139	168	180	3625	P 34x7	P 34x7	Con 16C	6-3 1/2 x 5 1/2	245	3	27.3	63-2500	L	CC	CC	2 1/2	8	4	FP	No	Str	V	D-R	D-R	12
13	Stewart.....29X-S	1695	149	176	4450	P 32x6	DP32x6	Lyc ASA	6-3 1/2 x 5 1/2	278	3	27.3	85-3100	L	CC	CC	2 1/2	9 1/2	4	FP	No	Str	V	D-R	D-R	13
14	Studebaker.....S-50	895	148	160	3810	B 6.50/20	DB 6.50/20	Con 16C	6-3 1/2 x 5 1/2	289	25	6	45-1600	L	CC	CC	2 1/2	11 1/2	3	FP	Own	Str	V	D-R	D-R	14
15	White.....56	3125	165	175	5276	S 38x4	S 38x4	Own GRC	4-4 1/2 x 5 1/2	289	25	6	45-1600	L	CC	CC	2 1/2	11 1/2	3	FP	Own	Str	V	D-R	D-R	15
16	White 160-1 1/2 to 2 T	138	157	165	5600	P 30x5	P 30x5	Own GRCB	4-4 1/2 x 5 1/2	289	25	6	45-1800	L	CC	CC	2 1/2	11 1/2	3	FP	Own	Str	V	D-R	D-R	16
17	Wichita.....6-50	3250	165	180	12500	P 32x6	P 32x6	Wau GXC	6-4 1/2 x 5 1/2	298	33	7	64-2200	L	CC	CC	2 1/2	12 1/2	7	FP	Own	Str	V	D-R	D-R	17
18	Witt-Will.....C2B	2450	158	180	5400	P 32x6	DP32x6	Con 16C	6-3 1/2 x 5 1/2	245	27	3	66-3200	L	CC	CC	2 1/2	10 1/2	7	FP	No	Str	V	D-R	D-R	18
19	Witt-Will.....C2W	2550	158	180	5820	P 32x6	DP32x6	Con 16C	6-3 1/2 x 5 1/2	245	27	3	66-3200	L	CC	CC	2 1/2	10 1/2	7	FP	No	Str	V	D-R	D-R	19
20	Witt-Will.....R2B	2550	158	180	5820	P 32x6	DP32x6	Con 16R	6-4 1/2 x 5 1/2	311	38	4	72-2400	H	CC	CC	2 1/2	11 1/2	7	FP	No	Str	V	D-R	D-R	20
21	Witt-Will.....R2	158	158	180	5800	P 32x6	DP32x6	Con 16R	6-4 1/2 x 5 1/2	311	38	4	72-2400	H	CC	CC	2 1/2	11 1/2	7	FP	No	Str	V	D-R	D-R	21
2 1/2 Ton																										
22	Acme.....56 Spec	3577	178	180	7050	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	38	4	82-2400	H	CC	CC	2 1/2	14 1/2	7	FP	Co	Str	V	A-L	A-L	22
23	Acme.....57	3770	186	190	7150	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	38	4	82-2400	H	CC	CC	2 1/2	14 1/2	7	FP	Co	Str	V	A-L	A-L	23
24	Amer. LaF. Chief 9R	3900	180	190	6400	P 34x7	DP34x7	Own	6-3 1/2 x 5 1/2	331	38	4	82-2400	H	CC	CC	2 1/2	14 1/2	7	FP	Co	Str	V	A-L	A-L	24
25	Atterbury.....50	189	202	205	6385	B 8.25/20	DB 8.25/20	Lyc ASD	6-3 1/2 x 5 1/2	298	23	7	85-2800	L	CC	CC	2 1/2	10 1/2	4	CC	Ha	Str	V	A-L	A-L	25
26	Autocar.....D 3500	150	192	190	5300	P 34x7	DP34x7	Own	6-4 1/2 x 5 1/2	358	38	4	82-2400	L	CC	CC	3	13 1/2	7	FP	Ha	Str	V	A-L	A-L	26
27	Available.....T-30	Op	Op	Op	6000	P 34x7	DP34x7	Wau ML	6-4 1/2 x 5 1/2	358	38	4	82-2400	L	CC	CC	2 1/2	12 1/2	7	FP	Ha	Str	V	A-L	A-L	27
28	Available T-37, T-38V	Op	Op	Op	7500	P 34x7	DP34x7	Wau MK	6-4 1/2 x 5 1/2	380	40	8	87-2500	L	CC	CC	3	13 1/2	7	FP	Ha	Str	V	A-L	A-L	28
29	Brookway.....141-1	170	200	200	6200	P 32x6	DP32x6	Con	6-4 1/2 x 5 1/2	311	38	4	73-2400	H	CC	CC	2 1/2	10 1/2	3	CC	Ha	Str	V	A-L	A-L	29
30	Brookway.....141-6	170	200	200	6200	P 32x6	DP32x6	Con	6-4 1/2 x 5 1/2	311	38	4	73-2400	H	CC	CC	2 1/2	10 1/2	3	CC	Ha	Str	V	A-L	A-L	30
31	Brookway.....170	170	200	200	6200	P 32x6	DP32x6	Con	6-4 1/2 x 5 1/2	311	38	4	73-2400	H	CC	CC	2 1/2	10 1/2	3	CC	Ha	Str	V	A-L	A-L	31
32	Brookway.....170	170	200	200	6200	P 32x6	DP32x6	Con	6-4 1/2 x 5 1/2	311	38	4	73-2400	H	CC	CC	2 1/2	10 1/2	3	CC	Ha	Str	V	A-L	A-L	32
33	Chicago.....1-24-A	160	208	208	5773	B 7.50/20	DB 7.50/20	Wau GML	6-4 1/2 x 5 1/2	358	38	4	77-2200	L	CC	CC	2 1/2	12 1/2	7	FP	Ha	Str	V	A-L	A-L	33
34	Chicago.....1-26-A	160	208	208	5928	B 8.25/20	DB 8.25/20	Wau GML	6-4 1/2 x 5 1/2	358	38	4	77-2200	L	CC	CC	2 1/2	12 1/2	7	FP	Ha	Str	V	A-L	A-L	34
35	Coleman.....C-30	120	144	144	7000	P 36x6	P 36x6	Bud DW6	6-3 1/2 x 5 1/2	331	38	4	73-2400	L	CC	CC	2 1/2	9 1/2	4	FP	Ha	Str	V	A-L	A-L	35
36	Commerce.....60	4580	175	182	7000	P 36x6	DP36x6	Bud D86	6-3 1/2 x 5 1/2	309	6	31.5	56-2000	L	CC	CC	2 1/2	7 1/2	4	FP	Co	Str	V	A-L	A-L	36
37	Commerce.....60	4580	175	182	7000	P 36x6	DP36x6	Bud D86	6-3 1/2 x 5 1/2	309	6	31.5	56-2000	L	CC	CC	2 1/2	7 1/2	4	FP	Co	Str	V	A-L	A-L	37
38	Corbitt.....2 1/2-3 T 15B6	174	220	220	5870	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38	4	72-2400	H	CC	CC	2 1/2	11 1/2	7	FP	No	Str	V	A-L	A-L	38
39	Corbitt.....2 1/2-3 T 15W6	174	220	220	5870	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38	4	72-2400	H	CC	CC	2 1/2	11 1/2	7	FP	No	Str	V	A-L	A-L	39
40	Day Elder.....130	2895	150	204	13000	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38	4	72-2400	H	CC	CC	2 1/2	11 1/2	7	FP	No	Str	V	A-L	A-L	40
41	Diamond T.....550	2820	172	238	6000	P 32x6	DP32x6	Her WXC	6-4 1/2 x 5 1/2	339	38	4	75-2400	L	CC	CC	2 1/2	13 1/2	7	FP	Ha	Str	V	A-L	A-L	41
42	Diamond T.....550	2820	172	238	6000	P 32x6	DP32x6	Her WXC	6-4 1/2 x 5 1/2	339	38	4	75-2400	L	CC	CC	2 1/2	13 1/2	7	FP	Ha	Str	V	A-L	A-L	42
43	Douglas.....CD4	3815	190	Op	17500	P 34x7	DP34x7	Bud EBU-I	6-4 1/2 x 5 1/2	312	38	9	49-1900	L	CC	CC	2 1/2	9	3	CC	Ha	Str	V	A-L	A-L	43
44	Douglas.....CD6	3940	190	Op	17500	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5 1/2	331	38	7	67-2600	L	CC	CC	2 1/2	9	4	CC	Ha	Str	V	A-L	A-L	44
45	Fageol.....250	2930	178	196	12500	P 32x6	DP32x6	Wau XK	6-3 1/2 x 5																	

Line Number	Radiator Make	Clutch	Gear Set		Universal Make and No.	Rear Axle		Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number								
			Type and Make	Make and Model		Location	No. of Forward Speeds	Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios		Service	Area Service Brakes	Steering Gear Make	Dim. Side Rail			Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front		Rear	
												Reduc. in High	Reduc. in Low											Hand	Hand	Front	Rear
2 Ton—Cont'd																											
1	Fed	P.B&B	B-L	U	3	No	Spl	Tim	5200H	WF	5.28	33.3	Own	L4IH	394	FX	Gem	6x3x4	106%	52%	2	40x2 1/2	50x3	1			
2	Lon	P.B-L	B-L 35	U	4	No	Blo	Own	30	2R	6.45	34.5	Tim	14704 H	L4IH	394	FX	Han	6x3x4	144	90	34	40x2 1/2	50x3	2		
3	Lon	P.B-L	B-L 20	U	4	No	Blo	Own	20	2R	6.00	30.0	Col	5530	L4IH	297	FX	Han	6x2 1/2 x 3 1/2	133 1/2	83	34	36x2 1/2	48x2 1/2	3		
4	Lon	D.B-L	B-L 51-5	U	5	No	Cle	Own	60	2R	7.88	58.5	Tim	14704 H	L4IH	584	FX	Han	7x3 1/2 x 1 1/2	144	82	34	40x2 1/2	54x3	4		
5	Own	D.B-L	Own	U	4	No	Cle	Own						L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	111 1/2	67	40	38x2 1/2	50x2 1/2	5			
6	Own	D.B-L	Own	U	4	No	Cle	Own						L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	127 1/2	83	40	38x2 1/2	50x2 1/2	6			
7	Own	D.B-L	Own	U	4	No	Cle	Own						L4IH	289	TX	Ros	6 1/2 x 3 1/2 x 1 1/2	87 1/2	57	40	38x2 1/2	50x2 1/2	7			
8	You	D.B-L	B-L 35	U	4	No	Spl	Tim	54000 H	WF	5.83	32.2	Tim	12703 H	L4IH	452	TX	Ros	6x3x4			31 1/2	40x2 1/2	50x3	8		
9	Own	D.B-L	B-L 35	U	4	No	Blo	Tim	54200H	WF	6.5	34.8	Tim	12703 H	L4IH	394	FX	Han	6x3x4	168	97	34	40x2 1/2	50x3	9		
10	Lon	D.B-L	B-L 35	U	4	No	Blo	Tim	63702	WF	5.82	29.2	Col	5530	L4IH	297	FX	Han	6x2 1/2 x 1 1/2	144	90	34	36x2 1/2	48x2 1/2	10		
11	Lon	P.B-L	B-L 20	U	4	No	Spl	Tim	54000 H	WF	5.8	29.2	Col	5530	L4IH	306	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	102	60	34	38x2 1/2	54x3	11		
12	Per	D.B-L	B-L 20	U	4	No	Spl	Tim	54000 H	WF	5.82	29.2	Col	5530	L4IH	306	TX	Ros	5 1/2 x 2 1/2 x 1 1/2	102	60	34	38x2 1/2	54x3	12		
13	Own	D.Ful	Own	U	4	No	Cle	Tim	54200-A1	WF	6.37	44.4	Cia		B4IM	276		Ros	7 1/2 x 2 1/2 x 1 1/2	106 1/2	63	32	38x2 1/2	50x3	13		
14	McC	Own	Own	U	4	No	Cle	Tim	54200-A1	WF	6.37	44.4	Cia		B4IM	276		Ros	7 1/2 x 2 1/2 x 1 1/2	106 1/2	63	32	38x2 1/2	50x3	14		
15	Own	P.Own	OwnGRBB	U	4	No	Spl	Own	56	2F	6.33	26.2	Own	3D1	O2IM	268	FX	Own	7x3x1	119 1/2	81	36	41 1/2 x 2 1/2	54 1/2 x 3	15		
16	Own	P.Own	Own 8B	U	4	No	Spl	Own	30R	2F	6.43	19.5	Own	4D	L4IH	138	TX	Han	6x2 1/2 x 1 1/2	112	58 1/2	34	39x2 1/2	50x2 1/2	16		
17	You	D.B-L	B-L 35	U	4	No	ST 3	Own	30R	2F	6.43	19.5	Own	4D	L4IH	138	TX	Han	6x2 1/2 x 1 1/2	112	58 1/2	34	39x2 1/2	50x2 1/2	17		
18	Per	D.B-L	B-L 35-4	U	4	No	Spl	Tim	56000H	WF	6.8	36.4	Tim	14703H	L4IH	578	TX	Ros	6x2 1/2 x 1 1/2	144	90	34	40x2 1/2	54x3	18		
19	Per	D.B-L	B-L 35-4	U	4	No	Spl	Tim	63720H	WF	6.8	36.4	Tim	14703H	L4IH	578	TX	Ros	6x2 1/2 x 1 1/2	144	90	34	40x2 1/2	54x3	19		
20	Per	D.B-L	B-L 35-4	U	4	No	Spl	Tim	56000H	WF	6.8	36.4	Tim	14703H	L4IH	578	TX	Ros	6x2 1/2 x 1 1/2	144	90	34	40x2 1/2	54x3	20		
21	Per	D.B-L	B-L 35-4	U	4	No	Spl	Tim	63720H	WF	6.8	36.4	Tim	14703H	L4IH	578	TX	Ros	6x2 1/2 x 1 1/2	144	90	34	40x2 1/2	54x3	21		
2 1/2 Ton																											
22	Per	D.B-L	B-L 55-7	A	7	No	Blo	Tim	65200H	WF	7.75	73.5	Tim	15733H	L4IH	659	2RI	Ros	6x3 1/2 x 1 1/2	154	88	34	40x2 1/2	54x3	22		
23	Per	D.B-L	B-L 60-4	A	7	No	Blo	Tim	65200H	WF	7.75	73.5	Tim	15733H	L4IH	659	2RI	Ros	6x3 1/2 x 1 1/2	154	88	34	40x2 1/2	54x3	23		
24	G&O	P.B&B	Own	U	4	No	Spl	Tim	65000BX	WF	6.0	28.8	Tim	14703H	B4IM	540		Ros	6 1/2 x 2 1/2 x 1 1/2	173	105	34	39x2 1/2	56x3	24		
25	Per	P.Own	Cov W4C	U	4	No	Spl	Own	SD	2F	6.3	33.7	Tim	14703	L4IH	460	2IM	Ros	6 1/2 x 3 1/2 x 1 1/2	114 1/2	63 1/2	34	40x2 1/2	54x3	25		
26	Per	P.Own	Cov W4C	U	4	No	Spl	Own	SD	2F	6.3	33.7	Tim	14703	L4IH	460	2IM	Ros	6 1/2 x 3 1/2 x 1 1/2	114 1/2	63 1/2	34	40x2 1/2	54x3	26		
27	You	D.B-L	B-L 51	U	4	No	Blo	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	27		
28	You	D.B-L	B-L 51	U	4	No	Blo	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	28		
29	G&O	D.B-L	B-L 35	U	4	No	Spl	Tim	65001	WF	6.0	28.8	Tim	14703H	L4IH	540		Ros	6 1/2 x 2 1/2 x 1 1/2	173	105	34	39x2 1/2	56x3	29		
30	G&O	D.B-L	B-L 35	U	4	No	Spl	Tim	65001	WF	6.0	28.8	Tim	14703H	L4IH	540		Ros	6 1/2 x 2 1/2 x 1 1/2	173	105	34	39x2 1/2	56x3	30		
31	G&O	D.B-L	B-L 35	U	4	No	Spl	Tim	65001	WF	6.0	28.8	Tim	14703H	L4IH	540		Ros	6 1/2 x 2 1/2 x 1 1/2	173	105	34	39x2 1/2	56x3	31		
32	G&O	D.B-L	B-L 35	U	4	No	Spl	Tim	65001	WF	6.0	28.8	Tim	14703H	L4IH	540		Ros	6 1/2 x 2 1/2 x 1 1/2	173	105	34	39x2 1/2	56x3	32		
33	Chi	D.B-L	B-L 34	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	33		
34	Chi	D.B-L	B-L 34	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	34		
35	Per	D.Ful	Ful G U14	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	35		
36	Lon	D.B-L	B-L 35	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	36		
37	Lon	D.B-L	B-L 35	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	37		
38	Per	P.B-L	B-L 314	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	38		
39	Per	P.B-L	B-L 314	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	39		
40	Per	P.B-L	B-L 314	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	40		
41	G&O	D.Cov	Cov	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	41		
42	G&O	D.Cov	Cov	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	42		
43	Own	D.Ful	FulMGU14	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	43		
44	Own	D.Ful	FulMGU14	U	4	No	Spl	Tim	65200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	44		
45	Per	P.B-L	B-L 314	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	45		
46	Per	P.B-L	B-L 314	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	46		
47	Lon	P.B-L	B-L 35	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	47		
48	Lon	D.B-L	B-L 35	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH			Ros	7x2 1/2 x 1 1/2	102	60	34	40x2 1/2	50x3	48		
49	Lon	D.B-L	B-L 35	U	4	No	Spl	Tim	58200H	WF	7.8	41.7	Shu	5572	L4IH												

Line Number	Make, Model and Capacity	General		Tire Size		Engine														Fuel System	Electrical System	Line Number					
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make		Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
3 Ton—Cont'd																											
1	Coleman.....D40	130	180	16600	8500	P 40x8	P 40x8	Bud DW 6	6-3 1/2 x 5	330.0	33.7	72-2600	L	G	G	G	9	4	FP	No	Str	V	D-R	D-R	1		
2	Commerce.....60	4680	175	192	7100	P 36x6	DP38x7	Bud BA-6	6-4 1/2 x 5 1/2	410.9	40.8	73-2000	L	G	G	G	9	4	FP	No	Str	V	D-R	D-R	2		
3	Concord.....JX-6	4200	154	174	6700	P 34x7	DP34x7	Bud DW 6	6-3 1/2 x 5	330.0	33.7	73-2100	L	G	G	G	9	4	FP	No	Str	V	D-R	D-R	3		
4	Corbitt 3-4 T.....18W6	178	230	19000	6750	P 36x8	DP36x8	Con 18R	6-4 1/2 x 5 1/2	340.0	38.4	82-2400	H	C	C	C	12	7	FP	No	Str	V	D-R	D-R	4		
5	Day-Elder.....160	3695	156	204	6600	B 7.50/20	DB9.00/20	Con 18R	6-4 1/2 x 5 1/2	339.3	38.4	82-2400	H	C	C	C	12	7	FP	No	Str	V	D-R	D-R	5		
6	Diamond T.....504	2925	167	16500	6400	B 8.25/20	DB8.25/20	Her WXC3	6-4 1/2 x 5 1/2	382.9	43.3	84-2200	L	G	G	G	15	7	FP	No	Str	V	D-R	D-R	6		
7	Diamond T.....602	3440	169	231	7500	P 36x8	DP36x8	Her YXC	6-4 1/2 x 5 1/2	428.4	45.9	94-2200	L	G	G	G	15	7	FP	No	Str	V	D-R	D-R	7		
8	Diamond T.....606	3500	170	242	7500	P 36x8	DP36x8	Her YXC	6-4 1/2 x 5 1/2	428.4	45.9	94-2200	L	G	G	G	15	7	FP	No	Str	V	D-R	D-R	8		
9	Dodge Bros.....F-60	2645	146	18979	5543	P 32x6	DP32x6	Own	6-3 1/2 x 5	309.6	31.5	96-3000	L	G	A	A	11 1/4	7	FP	Ha	Zen	M	D-R	D-R	9		
10	Dodge Bros.....F-61	2575	170	19429	5789	P 32x6	DP32x6	Own	6-3 1/2 x 5	309.6	31.5	96-3000	L	G	A	A	11 1/4	7	FP	Ha	Zen	M	D-R	D-R	10		
11	Dodge Bros.....F-62	2695	195	195	5901	P 32x6	DP32x6	Own	6-3 1/2 x 5	309.6	31.5	96-3000	L	G	A	A	11 1/4	7	FP	Ha	Zen	M	D-R	D-R	11		
12	Dodge Bros.....F-62	2695	195	195	5901	P 32x6	DP32x6	Own	6-3 1/2 x 5	309.6	31.5	96-3000	L	G	A	A	11 1/4	7	FP	Ha	Zen	M	D-R	D-R	12		
13	Douglas.....D4	4010	186	Op	20000	6500	S 36x10	Bud YBU-I	6-4 1/2 x 5 1/2	381.0	32.4	50-1400	L	G	G	G	9	3	PC	Bu	Zen	E	L-N	L-N	13		
14	Douglas.....D6	4430	186	Op	20000	6800	P 36x8	DP38x7	Bud BUS	6-4 1/2 x 5 1/2	386.4	38.4	78-2300	L	G	G	G	9	3	PC	Bu	Zen	E	L-N	L-N	14	
15	Douglas.....D6 5p	5500	216	Op	22000	7560	P 38x7	DP40x8	Bud BA6	6-4 1/2 x 5 1/2	411.0	40.8	83-2100	L	G	G	G	10 1/2	4	PC	Bu	Zen	E	L-N	L-N	15	
16	Duplex.....FAC	4250	166	16000	7200	P 34x5	S 36x8	Bud EBU-I	6-4 1/2 x 5 1/2	312.0	28.9	57-2100	L	G	G	G	10 1/2	4	PC	No	Zen	V	Elis	A-L	16		
17	Duplex.....SAC	4750	166	16000	7400	P 34x5	S 36x8	Bud BA 6	6-4 1/2 x 5 1/2	411.0	40.8	83-2250	L	G	G	G	10 1/2	4	PC	No	Zen	V	Elis	A-L	17		
18	Fagool.....340	4750	182	200	7820	P 36x6	DP36x6	Wau CU	6-4 1/2 x 5 1/2	346.0	33.7	78-1750	L	G	A	A	9	3	PC	Wa	Zen	V	D-R	D-R	18		
19	Fagool.....365	5200	182	200	7250	P 36x6	DP36x6	Wau KU	6-4 1/2 x 5 1/2	404.0	38.4	87-2500	L	G	A	A	13 1/2	7	FP	Wa	Zen	V	D-R	D-R	19		
20	Fagool.....370	5200	182	200	8080	P 36x6	DP36x6	Wau SRL	6-4 1/2 x 5 1/2	462.0	43.3	89-2200	L	G	C	C	13 1/2	7	FP	Wa	Zen	V	D-R	D-R	20		
21	Federal T10B 2 1/2-3 T	2740	165	201	6550	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38.4	75-2200	H	C	C	C	13 1/2	7	FP	Co	Zen	V	D-R	D-R	21		
22	Federal T10W 2 1/2-3 T	2915	165	201	6500	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38.4	75-2200	H	C	C	C	13 1/2	7	FP	Co	Zen	V	D-R	D-R	22		
23	Fisher-Stand H. D. 6	155	206	18000	6200	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	311	38.4	73-2400	H	C	C	C	13 1/2	7	FP	Co	Zen	V	D-R	D-R	23		
24	Fisher-Stand H. D. 6	155	206	18000	6200	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339.3	38.4	81-2400	H	C	C	C	13 1/2	7	FP	Co	Zen	V	D-R	D-R	24		
25	Freeman DW144	1900	144	15000	7560	P 34x7	DP34x7	Bud DW 6	6-3 1/2 x 5	330.0	33.7	73-2400	L	G	C	C	9	4	PC	Bu	Str	E	R-Bo	R-Bo	25		
26	Freeman DW186 3-3 1/2	5100	186	18600	7800	P 34x7	DP34x7	Bud DW 6	6-3 1/2 x 5	330.0	33.7	73-2400	L	G	C	C	9	4	PC	Bu	Str	E	R-Bo	R-Bo	26		
27	F.W.D.....4200	124	156	13960	6460	P 36x6	S 36x6	Own A	6-4 1/2 x 5 1/2	398.0	36.1	56-1350	T	G	C	C	12	3	PC	Pe	Str	G	Elis	A-L	27		
28	Garford.....60	4180	175	192	7100	P 36x6	DP38x7	Bud BA6	6-4 1/2 x 5 1/2	410.9	40.8	73-2000	L	G	G	G	9	4	FP	Bu	Zen	V	D-R	D-R	28		
29	(X) Gen. Mot. T30 2-3	1700	141	164	4705	P 32x6	DP32x6	Bulk	6-3 1/2 x 5	257.5	28.3	76-2500	H	G	C	C	8 1/2	4	PC	Ha	Mar	V	D-R	D-R	29		
30	(X) Gen. Mot. T42 2 1/2-4	1960	141	131	4905	P 36x6	DP36x6	Bulk	6-3 1/2 x 5	257.5	28.3	76-2500	H	G	C	C	8 1/2	4	PC	Ha	Mar	V	D-R	D-R	30		
31	(X) Gen. Mot. T44 3-4 1/2	1960	141	181	5005	P 36x6	DP36x6	Bulk	6-3 1/2 x 5	257.5	28.3	76-2500	H	G	C	C	8 1/2	4	PC	Ha	Mar	V	D-R	D-R	31		
32	Gramm.....E-330	2595	160	224	5500	B 8.25/20	DB8.25/20	Lyc TS	6-3 1/2 x 5	353.8	36.2	98-2700	L	G	C	C	10	4	PC	No	Zen	M	A-L	A-L	32		
33	Gramm.....EY-190	190	190	16000	6750	B 7.50/20	DB7.50/20	Con 20R	6-3 1/2 x 5	380.8	40.8	90-2200	H	C	C	C	13 1/2	7	FP	No	Zen	M	A-L	A-L	33		
34	Gramm.....35	153	200	15200	7200	P 36x6	S 36x10	Lyc TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	C	C	10	4	PC	No	Zen	M	A-L	A-L	34		
35	Gramm.....38	153	200	15200	7200	P 36x6	S 36x10	Lyc TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	C	C	10	4	PC	No	Zen	M	A-L	A-L	35		
36	Gramm-Bernstein A	153	200	15200	7200	P 36x6	S 36x10	Lyc TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	C	C	10	4	PC	No	Zen	M	A-L	A-L	36		
37	Gramm-Bernstein B6X	145	185	12500	4780	P 32x6	DP32x6	Con 16C	6-3 1/2 x 5 1/2	248.3	27.3	66-2900	L	C	C	C	10 1/2	7	FP	No	Zen	V	A-L	A-L	37		
38	Gramm-Bernstein B6X	144	184	12500	4765	P 32x6	DP32x6	Con 16C	6-3 1/2 x 5 1/2	248.3	27.3	66-2900	L	C	C	C	10 1/2	7	FP	No	Zen	V	A-L	A-L	38		
39	Gramm-Bernstein C6	150	201	15500	5920	S 36x4	DS36x4	Con 16R	6-3 1/2 x 5 1/2	331.4	33.7	70-2200	L	G	C	C	9 1/2	4	FP	Pe	Str	V	Elis	A-L	39		
40	Gramm-Bernstein DX	152	212	16000	6600	P 34x7	DP34x7	Con 16R	6-4 1/2 x 5 1/2	331.4	33.7	73-2400	L	G	C	C	13 1/2	7	FP	Ha	Zen	V	A-L	A-L	40		
41	Hahn.....47HB	120	166	16600	7200	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339.3	38.4	82-2400	H	C	C	C	13 1/2	7	FP	No	Zen	V	A-L	A-L	41		
42	Hug.....67	120	166	16600	7200	P 34x7	DP34x7	Bud H298	6-3 1/2 x 5 1/2	339.3	38.4	86-3000	L	G	C	C	9	4	PC	Bu	Zen	V	A-L	D-R	42		
43	Hug.....67	120	166	16600	7200	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	330.0	33.7	70-2100	L	G	C	C	9	4	PC	Bu	Zen	V	A-L	D-R	43		
44	Hug.....67	120	166	16600	7200	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	330.0	33.7	70-2100	L	G	C	C	9	4	PC	Bu	Zen	V	A-L	D-R	44		
45	Hug.....67	120	166	16600	7200	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	330.0	33.7	70-2100	L	G	C	C	9	4	PC	Bu	Zen	V	A-L	D-R	45		
46	Indiana.....127A	175	224	17500	7200	P 34x7	DP34x7	Her	6-4 1/2 x 5 1/2	326.3	28.9	54-1600	L	G	C	C											

Line Number	Radiator Make	Clutch	Gear Set	Universal Make and No.	Rear Axle	Front Axle	Brakes	Frame	Body Mounting Data	Springs	Auxiliary Type	Line Number												
Type and Make	Make and Model	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Reduc. in High	Reduc. in Low	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear	Auxiliary Type	Line Number	
1 Per	D.Ful	Ful RU 16	U	A2	Spl 5	Wis	Tim65706DH	WF	H 8.33 159	Wis	Tim 15733H	W2/4IM	TD	Ros	12x2 1/2 x 1/2	C	144	89	30	3	48x3	48x3	C	1
2 Onn	D.B-L	Ful VU	U	5 No	Blo	Tim	65706H	WF	R 9.3 49.7	Tim	15300 H	T2IMV	TD	Ros	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	2
3 Onn	D.B-L	B-L 55	U	4 No	Spl 3	Tim	65706H	WF	H 8.33 159	Tim	15733H	L4IHV	TD	Ros	8x3 1/2 x 1/2	C	132	92	34	40x2 1/2	54x3	54x3	N	3
4 Per	D.B-L	B-L 51	U	4 No	Spl 3	Tim	65706H	WF	R 9.3 49.7	Tim	15300 H	L4IHV	TD	Ros	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	4
5 Per	D.B-L	B-L 51	U	4 No	Spl 3	Tim	65706H	WF	H 8.33 159	Tim	15733H	L4IHV	TD	Ros	8x3 1/2 x 1/2	C	132	92	34	40x2 1/2	54x3	54x3	N	5
6 G&O	D.Cov	Cov	U	4 No	Spl 3	Tim	65706H	WF	R 9.3 49.7	Tim	15300 H	L4IHV	TD	Ros	6 1/2 x 3 1/2	P	126	83 1/2	34	45 1/2 x 2 1/2	56x3	56x3	N	6
7 G&O	D.Cov	Cov	U	4 No	Spl 3	Tim	65706H	WF	H 8.33 159	Tim	15733H	L4IHV	TD	Ros	6 1/2 x 3 1/2	P	126	83 1/2	34	45 1/2 x 2 1/2	56x3	56x3	N	7
8 G&O	D.Cov	Cov	U	4 No	Spl 3	Tim	65706H	WF	R 9.3 49.7	Tim	15300 H	L4IHV	TD	Ros	6 1/2 x 3 1/2	P	126	83 1/2	34	45 1/2 x 2 1/2	56x3	56x3	N	8
9 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 8.33 159	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	99 1/2	65 1/2	34	42x3	56x3 1/2	56x3 1/2	N	9
10 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	149 1/2	89 1/2	34	42x3	56x3 1/2	56x3 1/2	N	10
11 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	189 1/2	114 1/2	34	42x3	56x3 1/2	56x3 1/2	N	11
12 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	189 1/2	114 1/2	34	42x3	56x3 1/2	56x3 1/2	N	12
13 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	189 1/2	114 1/2	34	42x3	56x3 1/2	56x3 1/2	N	13
14 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	189 1/2	114 1/2	34	42x3	56x3 1/2	56x3 1/2	N	14
15 Onn	P.B&B	Own	U	4 No	Cle 3	Own	65706H	WF	H 7.12 48.8	Own	65706H	L4IHV	TD	Ros	10x3 1/2	C	189 1/2	114 1/2	34	42x3	56x3 1/2	56x3 1/2	N	15
16 Mod	D.B-L	B-L 51	U	5 No	Cle	Tim	65706H	WF	R 8.5 45.5	Shu	5550	T2IMV	TD	Ros	7x3 1/2 x 1/2	C	100	72 1/2	34	39x2 1/2	52x3	52x3	N	16
17 Mod	D.B-L	B-L 55	U	7 No	Cle	Tim	65706H	WF	R 8.5 45.5	Shu	5550	T2IMV	TD	Ros	7x3 1/2 x 1/2	C	100	72 1/2	34	39x2 1/2	52x3	52x3	N	17
18 Per	D.B-L	B-L 55 & 60	U	4 A3	Spl 4	Tim	65706H	WF	R 8.5 45.5	Shu	5550	T2IMV	TD	Ros	7x3 1/2 x 1/2	C	100	72 1/2	34	39x2 1/2	52x3	52x3	N	18
19 Per	D.B-L	B-L 51	U	4 No	Spl 3	Tim	65706H	WF	R 8.5 45.5	Shu	5550	T2IMV	TD	Ros	7x3 1/2 x 1/2	C	100	72 1/2	34	39x2 1/2	52x3	52x3	N	19
20 Per	P.B-L	B-L 55 & 60	U	4 A3	Spl 4	Tim	65706H	WF	R 8.5 45.5	Shu	5550	T2IMV	TD	Ros	7x3 1/2 x 1/2	C	100	72 1/2	34	39x2 1/2	52x3	52x3	N	20
21 Onn	P.B&B	Own	U	4 No	P-8 4	Tim	58200H	BF	R 6.8 34.4	Own	58200H	L4IHV	TD	Ros	7 1/2 x 3 1/2	C	119	81	34	42x2 1/2	54x3	54x3	N	21
22 Onn	P.B&B	Own	U	4 No	P-8 4	Tim	58200H	BF	R 6.8 34.4	Own	58200H	L4IHV	TD	Ros	7 1/2 x 3 1/2	C	119	81	34	42x2 1/2	54x3	54x3	N	22
23 Onn	D.B-L	B-L 51	U	4 No	Blo 4	Tim	56200H	IF	R 6.16 32.9	Tim	14703H	L4IHV	TD	Ros	6 1/2 x 2 1/2	C	144	78 1/2	32	43x2 1/2	54x3	54x3	N	23
24 Onn	D.B-L	B-L 51	U	4 No	Blo 4	Tim	56200H	IF	R 6.16 32.9	Tim	14703H	L4IHV	TD	Ros	6 1/2 x 2 1/2	C	144	78 1/2	32	43x2 1/2	54x3	54x3	N	24
25 Onn	D.B-L	B-L 51	U	4 No	Blo 4	Tim	56200H	IF	R 6.16 32.9	Tim	14703H	L4IHV	TD	Ros	6 1/2 x 2 1/2	C	144	78 1/2	32	43x2 1/2	54x3	54x3	N	25
26 Onn	D.B-L	B-L 51	U	4 No	Blo 4	Tim	56200H	IF	R 6.16 32.9	Tim	14703H	L4IHV	TD	Ros	6 1/2 x 2 1/2	C	144	78 1/2	32	43x2 1/2	54x3	54x3	N	26
27 McC	O.M-E	Cot DAF	U	4 A2	B-C	Own	58200H	BF	R 8.5 155	Own	58200H	OP/4XM	336 TX	Woh	7x3 1/2 x 1/2	C	174	114 1/2	32	54x3	52x4	52x4	N	27
28 Onn	D.Ful	Ful VU	U	5 No	Blo 4	Tim	65706DH	WF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	28
29 Onn	D.Own	Mun	U	4 No	Spl	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	29
30 Onn	D.Own	Mun	U	4 No	Spl	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	30
31 Onn	D.Own	Mun	U	4 No	Spl	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	31
32 Per	D.Own	Cov Run-4	U	4 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	32
33 Per	D.Ful	FulMG 14	U	4 A4	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	33
34 Onn	D.Ful	Ful H	U	4 A4	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	34
35 Onn	D.Ful	FulMG U	U	4 A4	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	35
36 Onn	D.Ful	B-L 55 Max	U	4 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	36
37 Onn	D.Ful	Ful KU12	U	4 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	37
38 Onn	D.Ful	Ful KU12	U	4 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	38
39 Onn	D.Ful	Ful GOG	U	4 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	39
40 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	40
41 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	41
42 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	42
43 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	43
44 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	44
45 Onn	D.B-L	B-L 51	U	5 No	Blo 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	45
46 Onn	P.B&B	B-L	U	5 No	Spl 2	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	46
47 G&O	P.B&B	B-L	U	5 No	Spl 2	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	47
48 Onn	P.B&B	B-L	U	5 No	Spl 2	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	48
49 Onn	P.B&B	B-L	U	5 No	Spl 2	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	49
50 G&O	D.B-L	B-L	U	5 No	Spl 3	Tim	58200H	BF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	50
51 Mod	P.Own	Own	U	5 No	M.M.	Own	1000	WF	H 8.5 63.0	Own	1000	BE4IM	430 2I	Ros	8 1/2 x 3 1/2	C	115	72 1/2	34	42x3	56x3	56x3	N	51
52 Mod	P.Own	Own	U	5 No	M.M.	Own	1000	WF	H 8.5 63.0	Own	1000	BE4IM	430 2I	Ros	8 1/2 x 3 1/2	C	115	72 1/2	34	42x3	56x3	56x3	N	52
53 Per	D.B-L	B-L 51	U	4 No	Spl	Tim	58001	WF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	53
54 Per	D.B-L	B-L 51	U	4 No	Spl	Tim	58001	WF	H 8.5 63.0	Tim	15733H	L4IHV	584 FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	54x3	N	54
55 Per	D.B-L	B-L 55 & 60																						

Line Number	Make, Model and Capacity	General			Tire Size		Engine														Fuel System		Electrical System		Line Number		
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dis. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make		Generator, Starter Make	
3 1/2 Ton—Cont'd																											
1	International W2 3 1/2-6	148	200	200	8400	S 36x5	S36x10	Has 151	4-4 1/2 x 5 1/2	312	28.9	59-1800	H	C	A	2 1/2	8 3/4	3	PC	HS	Zen	U	R-Bo	D-R	1		
2	International HS-74C	160	235	200	10290	S 36x5	S 40x12	Has 152	4-4 1/2 x 5 1/2	330	38.1	60-1800	H	C	A	2 1/2	8 3/4	3	PC	HS	Zen	U	R-Bo	D-R	2		
3	Kenworth	205	5850	172	223	20500	7700	P 36x8	DP36x8	Bud GL6	6-4 1/2 x 5 1/2	572	5.48	6	L	C	2 1/2	10 1/2	4	PC	HS	Zen	V	R-Bo	D-R	3	
4	Kenworth	220	5200	194	221	22000	8400	P 36x8	DP36x8	Has 160	6-4 1/2 x 5 1/2	468	2.43	3	L	C	2 1/2	10 1/2	4	PC	HS	Zen	V	R-Bo	D-R	4	
5	LaFrance-Republic H-2	174	198	15000	5600	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	354	36.2	89-2600	L	C	C	2 1/2	10 1/2	4	PC	HS	Zen	V	R-Bo	D-R	5		
6	LaFrance-Republic M-1	174	198	15000	5600	P 36x8	DP36x8	Wau GKS	6-4 1/2 x 5 1/2	358	38.4	77-2500	H	C	C	2 1/2	10 1/2	4	PC	HS	Zen	V	R-Bo	D-R	6		
7	Larrabee	65	4250	166	204	18400	7200	B 36x5/20	DP36x5/20	Con 18R	6-4 1/2 x 5 1/2	339	3.3	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	G	D-R	D-R	7	
8	Moreland	37	3520	182	15000	6000	P 34x7	DP34x7	Her WXC 2	6-4 1/2 x 5 1/2	360	8.40	73-3000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	A-L	A-L	8		
9	Omort	35	150	150	21000	7600	P 36x8	DP36x8	Her WXC	6-4 1/2 x 5 1/2	339	3.8	73-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	A-L	A-L	9		
10	Pierce-Arrow	4500	156	198	7800	S 36x5	DS36x5	Own	4-4 1/2 x 5 1/2	276	5.25	83-2000	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	10			
11	Relay	60	4745	175	192	7800	S 36x5	DP36x8	Bud BA6	6-4 1/2 x 5 1/2	410	9.40	83-2000	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	11		
12	Relay	80	5330	165	192	8600	P 36x6	DP36x8	Bud BA 6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	12		
13	Service	80	5250	175	192	8200	S 36x12	Bud BA 6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	13			
14	Sterling	177	15000	150	164	13000	5500	S 34x7	Wau GKS	6-3 1/2 x 5 1/2	298	0.33	77-2500	L	C	2 1/2	12 1/2	7	PC	No	Zen	V	R-Bo	D-R	14		
15	Stewart	193	3690	165	235	7010	S 36x5	S 36x10	Lye TS	6-3 1/2 x 5 1/2	354	0.33	90-2750	L	C	2 1/2	10 1/2	4	PC	HS	Zen	U	R-Bo	D-R	15		
16	Studebaker	193	3690	165	235	7010	S 36x5	S 36x10	Lye TS	6-3 1/2 x 5 1/2	354	0.33	90-2750	L	C	2 1/2	10 1/2	4	PC	HS	Zen	U	R-Bo	D-R	16		
17	Walter	6300	Op 118	20000	8000	B 7.50/20	DB 7.50/20	Own	8-3 1/2 x 4 1/2	337	0.39	115-3200	L	C	C	2 1/2	9 1/2	4	PC	No	Zen	M	D-R	D-R	17		
18	Ward La France 30B	197	209	16000	7800	B 8.25/20	DB8.25/20	Own	8-3 1/2 x 4 1/2	322	36.4	100-2400	L	C	C	2 1/2	10 1/2	4	PC	No	Zen	M	D-R	D-R	18		
19	Ward La France 30RU	197	209	16000	7800	B 8.25/20	DB8.25/20	Wau GKS	6-3 1/2 x 5 1/2	322	36.4	100-2400	L	C	C	2 1/2	10 1/2	4	PC	No	Zen	M	D-R	D-R	19		
20	White	55	4650	174	215	21500	8737	S 36x5	DS40x5	Own GRB	4-4 1/2 x 5 1/2	328	3.28	94-1600	L	C	2 1/2	11 1/2	4	PC	HS	Zen	U	R-Bo	D-R	20	
21	White 63 2 1/2-3 1/2	5000	215	215	18000	8350	P 34x7	DP34x7	Own SA	6-4 1/2 x 5 1/2	396	0.38	72-1800	H	C	C	2 1/2	12 1/2	7	PC	No	Zen	M	D-R	D-R	21	
22	Wichita	60	4925	166	204	20000	7500	P 34x7	DP36x8	Wau SRL	6-4 1/2 x 5 1/2	381	32.4	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	22	
23	Witt-Will	R35	4200	159	15000	6800	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	2.38	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	23		
24	Witt-Will	R35	4200	159	15000	6800	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	2.38	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	24		
4 Ton																											
26	Armleder	41	3000	Op 199	16300	6500	P 34x7	DP34x7	Her WXC	6-4 1/2 x 5 1/2	339	38.4	73-2000	L	C	2 1/2	12 1/2	7	PC	Ha	Zen	V	A-L	A-L	26		
27	Atterbury	C	4750	186	220	19315	8300	P 36x8	Con 20R	6-4 1/2 x 5 1/2	381	40.8	82-2400	H	C	2 1/2	12 1/2	7	PC	Ha	Zen	V	A-L	A-L	27		
28	Available	T-45	Op Op	20000	8800	B 9.75/20	DB9.75/20	Wau GAB	6-4 1/2 x 5 1/2	549	48.6	100-2000	L	C	2 1/2	11 1/2	4	PC	HS	Zen	V	A-L	A-L	28			
29	Brookway 220-3 1/2-4 1/2	170	224	22000	8200	P 40x8	DP40x8	Con	6-4 1/2 x 5 1/2	527	5.45	97-2000	L	C	2 1/2	11 1/2	4	PC	HS	Zen	V	A-L	A-L	29			
30	Chicago	1-50-60	236	18780	7780	B9.75/20	DB9.75/20	Wau 6SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	C	2 1/2	11 1/2	4	PC	HS	Zen	V	A-L	A-L	30			
31	Clinton	90	4800	190	Op	19550	8000	S 36x5	DS36x6	Bud YTU	4-4 1/2 x 5 1/2	381	32.4	83-2000	L	C	2 1/2	11 1/2	4	PC	HS	Zen	V	A-L	A-L	31	
32	Clinton	90	4800	190	Op	19550	8000	S 36x5	DS36x6	Bud YTU	4-4 1/2 x 5 1/2	381	32.4	83-2000	L	C	2 1/2	11 1/2	4	PC	HS	Zen	V	A-L	A-L	32	
33	Commerce	80	5330	175	192	8400	S 36x8	S 36x14	Bud BA 6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	V	A-L	A-L	33		
34	Corbitt 24W6 4-5 Ton	195	230	24500	9200	P 38x9	DP38x9	Con 20R	6-4 1/2 x 5 1/2	381	40.8	73-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	34			
35	Day Elder	200	4295	156	204	20000	7400	B 9.00/20	DB9.00/20	Con 18R	6-4 1/2 x 5 1/2	339	3.38	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	35	
36	Fageol	445	5650	183	216	22500	9300	P 36x6	DP36x6	Wau DU	4-4 1/2 x 5 1/2	398	32.4	54-1500	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	36	
37	Fageol	445	5650	183	216	22500	9300	P 36x6	DP36x6	Wau AB	4-4 1/2 x 5 1/2	398	32.4	54-1500	L	C	2 1/2	9 1/2	4	PC	HS	Zen	U	R-Bo	D-R	37	
38	Fageol	445	5650	183	216	22500	9300	P 36x6	DP36x6	Wau SRL	4-4 1/2 x 5 1/2	462	45.9	99-2200	L	C	2 1/2	13 1/2	7	PC	No	Zen	V	A-L	A-L	38	
39	Fisher-Stand Super 6	156	206	21000	6800	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	3.38	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	39			
40	Fisher-Stand Super 6 1/2	156	206	21000	7100	P 34x7	DP34x7	Con 18R	6-4 1/2 x 5 1/2	339	3.38	82-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	40			
41	Fisher-Stand Super 6 1/2	156	206	21000	7200	P 36x8	DP36x8	Con 21R	6-4 1/2 x 5 1/2	427	5.45	102-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	41			
42	Fisher-Stand Super 6 1/2	156	206	21000	7500	P 36x8	DP36x8	Con 21R	6-4 1/2 x 5 1/2	427	5.45	102-2400	H	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	42			
43	Freeman	BA	314	156	206	22000	7500	P 36x8	DP36x8	Bud BA6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	43	
44	Freeman	BA	314	156	206	22000	7500	P 36x8	DP36x8	Bud BA6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	44	
45	F.W.D.	SSU	5220	148	Op	17500	7500	P 38x9	P 38x9	Con 20R	6-4 1/2 x 5 1/2	381	40.8	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R	45	
46	Garford	80	5330	175	192	8400	S 36x8	S 36x14	Bud BA 6	6-4 1/2 x 5 1/2	411	0.40	83-2000	L	C	2 1/2	13 1/2	7	PC	No	Zen	M	D-R	D-R</			

Line Number	Radiator Make	Clutch	Gear Set			Universal Make and No.	Rear Axle	Front Axle			Brakes			Frame			Body Mounting Data			Springs			Line Number				
			Type and Make	Make and Model	Location			No. of Forward Speeds	Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle		Width of Frame	Front	Rear	Auxiliary Type
1	Own	P.Own	Own	U	5	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	1			
2	Own	P.Own	Own	U	5	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	2			
3	Per	D.B-L	B-L 60	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	3			
4	Per	D.B-L	B-L 60	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	4			
5	Per	D.Ful	Ful MG U	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	5			
6	Own	D.Ful	Ful VUOG	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	6			
7	Own	D.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	7			
8	Lon	D.Own	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	8			
9	Own	D.Ful	Ful MGOG	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	9			
10	G&O	D.Own	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	10			
11	Lon	Ful	Ful VU	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	11			
12	Lon	P.B&B	Cov SHO	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	12			
13	Lon	P.B-L	B-L 60Max	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	13			
14	Hex	D.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	14			
15	Hex	D.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	15			
16	Mod	D.Ful	Ful	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	16			
17	Lon	D.Lon	Ful	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	17			
18	Own	Own	Own	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	18			
19	Own	P.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	19			
20	Own	P.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	20			
21	Own	P.Own	Own 4B	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	21			
22	Own	P.Own	Own 4B	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	22			
23	Own	P.Own	Own 4B	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	23			
24	Own	P.Own	Own 4B	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	24			
25	Per	D.B-L	B-L 51	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	25			
26	Own	D.Ful	Ful MG U	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	26			
27	Own	D.Ful	Ful MG U	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	27			
28	Own	D.Ful	Ful MG U	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	28			
29	G&O	D.Own	Ful MGOG	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	29			
30	Chi	D.B-L	B-L 60Max	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	30			
31	Own	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	31			
32	Own	D.B-L	B-L 55Max	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	32			
33	Lon	D.Own	B-L 60Max	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	33			
34	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	34			
35	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	35			
36	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	36			
37	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	37			
38	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	38			
39	Lon	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	39			
40	Lon	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	40			
41	Lon	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	41			
42	Lon	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	42			
43	Lon	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	43			
44	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	106 1/2	73 1/2	34	41 1/2 x 3	56x3 1/2	44			
45	Per	D.B-L	B-L 55	U	4	No	Own	Tim 1200	2F	H 9.95	83.9	Own 400	BE41M	710	21	Own	7x3x1/4	T	10								

Line Number	Make, Model and Capacity	General		Tire Size		Engine										Fuel System		Electrical System		Line Number								
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings		Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make		
5 Ton—Cont'd																												
1	International HS-104C	160	235		10595	S 36x6	S 40x14	Has 152	4-4 1/2 x 5 1/2	390	36.1	60-1800	H	G	C	A	3	8 1/2	3	PC	HS	Zen	G	R-Bo	D-R-3	1		
2	International W-3	160	235		10125	S 36x6	S 40x12	Ha S152	4-4 1/2 x 5 1/2	390	36.1	60-1800	H	G	C	A	3	8 1/2	3	PC	HS	Str	V	R-Bo	D-R	2		
3	Kleiber	66	5000	206	22000	9435	B 9.75/20	DB9 75x20	Con 21R	6-4 1/2 x 5 1/2	428	44.9	100-2600	H	G	C	C	3 1/2	13 1/2	7	PC	HS	Str	V	R-Bo	D-R	3	
4	Lange	T	5775	148	188	26000	9200	DP40x8	Her YXC2	6-4 1/2 x 4 1/2	453	48.6	99-2200	L	G	C	C	3 1/2	15	7	PC	Pe	Str	M	A-L	A-L	4	
5	Maccar	86	177	209	22900	8200	S 36x6	DP36x6	Bud BA6	6-4 1/2 x 5 1/2	411	40.8	75-2200	L	G	C	C	3 1/2	15	7	PC	Pe	Str	V	A-L	A-L	5	
6	Mack	58A	6350	150	216	25000	8500	B10.50/20	Her YXC3	6-4 1/2 x 4 1/2	479	51.3	106-2400	L	G	C	C	3 1/2	15	7	PC	Pe	Str	V	A-L	A-L	6	
7	Mack	C1	5550	154	190		P 36x8	DP36x8	Own BC	6-4 1/2 x 5 1/2	414	38.4	100-2300	L	G	C	C	3 1/2	12 1/2	7	PC	Pe	Str	V	N-E	N-E	7	
8	Mack BC 3 1/2-5 Ton.	5500	154	190			P 36x8	DP36x8	Own BK	6-4 1/2 x 5 1/2	525	24.8	126-2200	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	N-E	N-E	8	
9	Mack BJ 3 1/2-5 Ton.	6150	169	240			P 36x8	DP36x8	Own BK	6-4 1/2 x 5 1/2	525	24.8	126-2200	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	N-E	N-E	9	
10	Mack AK 3 1/2-5 Ton.	5150	162	228			P 36x5	DS36x5	Own AC	4-5x6	471	240	77-1800	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	R-Bo	R-Bo	10	
11	Mack AK 3 1/2-5 Ton.	5250	162	228			P 36x5	DS36x5	Own AC	4-5x6	471	240	77-1800	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	R-Bo	R-Bo	11	
12	Mack AC 3 1/2-5 Ton.	4950	156	240			P 36x5	DS40x5	Own AC	4-5x6	471	240	77-1800	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	R-Bo	R-Bo	12	
13	Moreland	EX-7	4325	182	19000	6500	B 9.00/20	DB9.00/20	Her WXC2	6-4 1/2 x 5 1/2	360	40.8	78-1800	L	G	C	C	2 1/2	12 1/2	7	PC	No	Str	M	A-L	A-L	13	
14	Pierce-Arrow	RD	5400	162	198	8750	S 36x6	DS36x7	Own RD	4-4 1/2 x 5 1/2	429	43.2	112-2400	L	G	C	C	2 1/2	12 1/2	7	PC	No	Str	M	A-L	A-L	14	
15	Relay	100AC	6615	230		10000	B 9.00/24	DB9.00/24	Con 21R	4-4 1/2 x 5 1/2	428	44.9	112-2400	L	G	C	C	2 1/2	12 1/2	7	PC	No	Str	M	A-L	A-L	15	
16	Schacht De Luxe	40	174	199	22000	7500	P 36x8	DP36x8	Her WXC2	6-4 1/2 x 5 1/2	360	40.8	80-2200	L	G	C	C	2 1/2	13 1/2	7	PC	Mo	Str	V	A-L	A-L	16	
17	Selden	67C	5830	175	192	8700	P 36x8	DP36x8	Con 21R	6-4 1/2 x 5 1/2	427	45.9	100-2400	L	G	C	C	2 1/2	13 1/2	7	PC	Mo	Str	V	A-L	A-L	17	
18	Service	31X	4990	165	235	8400	S 36x6	DP36x6	Wau 6SRLL	6-4 1/2 x 5 1/2	462	45.9	100-2000	L	G	C	C	2 1/2	12 1/2	7	PC	On	Str	V	D-R	D-R	18	
19	Stewart	FHS	7600	136	26000	9000	B 9.75/24	DB9.75/24	Wau 6	6-4 1/2 x 5 1/2	549	45.9	100-1800	L	G	C	C	3 1/2	10 1/2	4	PS	On	Str	V	D-R	D-R	19	
20	Walter	50C	Op	Op	24000	9600	S 36x6	DS40x7	Wau SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	G	C	C	3 1/2	11 1/2	4	PC	On	Str	V	D-R	D-R	20	
21	Ward La France	50C	Op	Op	24000	9600	S 36x6	DS40x7	Wau SRL	6-4 1/2 x 5 1/2	462	45.9	97-2000	L	G	C	C	3 1/2	11 1/2	4	PC	On	Str	V	D-R	D-R	21	
22	White	52	5100	174	215	9409	S 36x6	DS40x7	Own GRB	6-4 1/2 x 5 1/2	326	32.8	94-1600	L	G	C	C	3 1/2	11 1/2	4	PC	On	Str	V	Els	Els	22	
23	White	55	4765	174	215	9409	S 36x6	DS40x7	Own GRB	6-4 1/2 x 5 1/2	326	32.8	94-1600	L	G	C	C	3 1/2	11 1/2	4	PC	On	Str	V	Els	Els	23	
24	White 64	3 1/2 to 5 T	6300	180	215	9150	P 36x8	DP36x8	Own IAB	6-4 1/2 x 5 1/2	519	45.9	96-1800	L	G	C	C	3 1/2	15 1/2	7	PC	On	Str	V	D-R	D-R	24	
25	Witt-Will	R5	5300	159	24000	9000	P 38x9	DP38x9	Con 20R	6-4 1/2 x 5 1/2	381	40.8	88-2400	H	G	C	C	2 1/2	13 1/2	7	PC	No	Str	M	D-R	D-R	25	
5 1/2 Ton and More																												
27	Amer. LaFrance 26 1/2	5750	Op	Op	9600	S 36x7	DS40x7	Own 5R	4-4 1/2 x 6	425	23.6	1	50-1200	L	G	C	C	2 1/2	9 1/2	3	PS	On	Zen	V	A-Bo	ABol	27	
28	Amer. LaFrance 26 1/2	5750	Op	Op	9600	S 36x7	DS40x7	Own 5R	4-4 1/2 x 6	425	23.6	1	50-1200	L	G	C	C	2 1/2	9 1/2	3	PS	On	Zen	V	A-Bo	ABol	28	
29	Am.-LaF. Big Ch. 16R	6500	226	Op	30000	10000	P 40x8	DP40x8	Own	6-4 1/2 x 6	425	23.6	1	50-1200	L	G	C	C	2 1/2	9 1/2	3	PS	On	Zen	V	D-R	D-R	29
30	Autocar	F 7 1/2 Ton	6800	173	214	11000	S 36x7	DS40x8	Own	6-4 1/2 x 5 1/2	453	48.6	101-2400	L	G	C	C	2 1/2	14 1/2	7	PC	On	Str	V	D-R	L-N	30	
31	Brockway	290-7 1/2 Ton	5800	172	30000	10750	P 38x7	DP38x7	Con	6-4 1/2 x 5 1/2	611	45.9	116-1800	L	G	C	C	2 1/2	13 1/2	7	PC	On	Str	V	E-L	L-N	31	
32	Clinton	120SM-7 1/2 Ton	5600	172	30000	10750	P 38x7	DP38x7	Con	6-4 1/2 x 5 1/2	611	45.9	116-1800	L	G	C	C	2 1/2	13 1/2	7	PC	On	Str	V	E-L	L-N	32	
33	Coleman F-200 7 1/2 Ton	5600	172	30000	10750	P 38x7	DP38x7	Con	6-4 1/2 x 5 1/2	611	45.9	116-1800	L	G	C	C	2 1/2	13 1/2	7	PC	On	Str	V	E-L	L-N	33		
34	Commerce	100 2B	5830	175	32000	13750	P 44x10	DP44x10	Sterling	6-5 1/2 x 6	779	36.6	177-2200	L	G	A	3	13 1/2	7	PC	St	Sch	P	N-E	N-E	34		
35	Corbitt 5-7 T	33W6	195	230	33200	10000	S 36x6	DS40x6	Bud BA6	6-4 1/2 x 5 1/2	411	40.8	83-2000	L	G	C	C	2 1/2	9 1/2	4	PC	On	Str	V	D-R	D-R	35	
36	Federal	X8 7 1/2 Ton	5085	162	186	9750	S 36x6	S 40x14	Con B7	6-4 1/2 x 5 1/2	427	45.9	112-2400	L	G	C	C	2 1/2	13 1/2	7	PC	On	Str	V	A-L	A-L	36	
37	Federal	X8R 7 1/2 Ton	5810	162	186	10000	S 36x6	S 40x14	Con B7	6-4 1/2 x 5 1/2	427	45.9	112-2400	L	G	C	C	2 1/2	13 1/2	7	PC	On	Str	V	A-L	A-L	37	
38	F.W.D. M7 7 1/2 Ton	8700	165	Op	32250	13000	P 40x10	DP40x10	Con 21R	6-5x6	427	45.9	127-2000	L	G	C	C	3 1/2	11 1/2	4	PC	On	Str	V	D-R	D-R	38	
39	Freeman GL 7 1/2 Ton	7200	156	Op	10000	P 38x9	DP38x9	Bud GL 6	6-4 1/2 x 5 1/2	572	45.9	114-2200	L	G	C	C	3 1/2	10 1/2	4	PC	On	Str	V	D-R	D-R	39		
40	Freeman	GL 186	7400	186		8650	P 38x9	DP38x9	Bud GL 6	6-4 1/2 x 5 1/2	572	45.9	114-2200	L	G	C	C	3 1/2	10 1/2	4	PC	On	Str	V	D-R	D-R	40	
41	Freeman BAS-156 5 T	6650	156	Op	8650	P 38x9	DP38x9	Bud BA6	6-4 1/2 x 5 1/2	411	40.8	83-2000	L	G	C	C	2 1/2	9 1/2	4	PC	On	Str	V	A-L	A-L	41		
42	Freeman BAS-156 5 T	6650	156	Op	8650	P 38x9	DP38x9	Bud BA6	6-4 1/2 x 5 1/2	411	40.8	83-2000	L	G	C	C	2 1/2	9 1/2	4	PC	On	Str	V	A-L	A-L	42		
43	Garford	1002B	5830	175	32000	13750	P 44x10	DP44x10	Bud BA6	6-4 1/2 x 5 1/2	411	40.8	83-2000	L	G	C	C	2 1/2	9 1/2	4	PC	On	Str	V	A-L	A-L	43	
44	(X) Gen. Mot. T60 3 1/2-6 Ton	6320	154	200	22000	7065	B 9.00/20	DB9.75/20	Bulck	6-3 1/2 x 5	331	43.7	94-2500	H	G	A	2 1/2	9 1/2	4	PC	On	Str	V	D-R	D-R	44		
45	(X) Gen. Mot. T82 4-7 Ton	4055	155	201	24000	7880	B 9.75/20	DB10.50/20	Own Own331	6-3 1/2 x 5																		

Line Number	Clutch		Gear Set		Universal Make and No.	Rear Axle		Front Axle		Brakes		Frame		Body Mounting Data		Springs		Line Number							
	Type and Make	Make and Model	Location	No. of Forward Speeds		Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Gear Ratios	Reduc. in High	Reduc. in Low	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail		Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear	Auxiliary Type
1	Own	P.Own	Own	U	5	No	Own	Own 1300	CD	R 10.1 90.5	Eat 74C	BO4IM	736	41	Own	8x3x1/4	T	120	82 1/2	34	44x3	54x4	1		
2	Own	P.Own	Own	U	5	No	Own	Tim 66702D	WF	R 7.85 70.5	Own 500	BE41M	794	21	Own	8x3x1/4	T	120	81 1/4	34	44x3	58x4	2		
3	Mod	D.B-L	B-L 60 Max	A	4	No	Own	Wis 1700	2F	R 10.0 96.0	Tim 16302	OPV	690	FD	Own	8x3x1/4	T	192	130	38	44x2 1/2	52x3	3		
4	Bus	D.B-L	B-L 55	A	4	No	Own	Tim 66702D	WF	R 9.66 51.7	Tim 16302	W21M	802	FD	Own	8x3x1/4	T	154 1/2	99 1/4	37	49x3	56x4	4		
5	Per	B-L	B-L 60	A	4	No	Own	Tim 66702D	WF	R 7.8 74.1	Tim 26450W	W941A	TD	Own	9x3x1/4	P	148	92 1/4	33	42x3	58 1/2 x3	5			
6	Own	P.Own	Own BC	U	4	No	Own	Own BC	CD	R 7.17 46.8	Own BC	O41V	589	FD	Own	8 1/2 x3x1/4	T	120	73	33 1/2	42 1/2 x3	54x3	6		
7	Own	P.Own	Own BJ	U	4	No	Own	Own AK	2F	R 4.25 22.2	Own BJ	O41V	578	FD	Own	8 1/2 x2 1/4 x1/4	T	144	80	33 1/2	48x3 1/4	56 1/2 x3 1/2	7		
8	Own	P.Own	Own AC	A	4	No	Own	Own AC	CD	R 5.99 38.5	Own AK	O41V	490	JX	Own	8 1/2 x2 1/4 x1/4	T	132	93	37 1/2	48x3 1/4	52x4	8		
9	Own	P.Own	Own AC	A	4	No	Own	Own AC	2F	R 5.14 41.1	Own AK	O41V	490	FJ	Own	8 1/2 x2 1/4 x1/4	T	132	93	37 1/2	48x3 1/4	56x4	9		
10	Own	P.Own	Own AC	A	4	No	Own	Own AC	CD	R 5.14 41.1	Own AK	O41V	490	FJ	Own	8 1/2 x2 1/4 x1/4	T	132	93	37 1/2	48x3 1/4	56x4	10		
11	Own	P.Own	Own AC	A	4	No	Own	Own AC	2F	R 5.14 41.1	Own AK	O41V	490	FJ	Own	8 1/2 x2 1/4 x1/4	T	132	93	37 1/2	48x3 1/4	56x4	11		
12	Lon	P.B-L	B-L 51	U	4	No	Own	Tim 65706H	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	12		
13	Lon	D.Own	Own RD	U	4	No	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	13		
14	Own	D.Own	Own RD	U	4	No	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	14		
15	Lon	D.Ful	Ful VU	U	4	No	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	15		
16	You	D.B-L	Ful MG U	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	16		
17	Own	D.Ful	B-L 55	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	17		
18	Own	D.Ful	B-L 60 Max	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	18		
19	Mod	D.Ful	B-L 60 Max	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	19		
20	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	20		
21	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	21		
22	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	22		
23	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	23		
24	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	24		
25	Own	P.Own	Own GRBA	U	4	Op	Own	Own RD	WF	R 7.78 85.4	Tim 16710H	LA1HV	429	TI	Own	9 1/2 x3 1/2 x5	T	132	82	37	46x3 1/2	52x4	25		
26	Per	D.B-L	B-L 55	U	4	A7	Spl	Tim 66704DH	WF	R 9.0 98.2	Tim 16700H	LA1HV	690	TD	Ros	8x3x1/4	C	144	94 1/4	32	48x3	54x4	26		
27	Own	D.Own	Own 5R	A	4	No	Own	Own 5R	WF	R 10.0 54.4	Own 5R	O2FM	600	TX	Own	8x3x1/4	C	120	82 1/2	34	44x3	54x4	27		
28	Bus	D.Own	Own 5R	A	4	No	Own	Own 5R	WF	R 10.0 54.4	Own 5R	O2FM	600	TX	Own	8x3x1/4	C	120	82 1/2	34	44x3	54x4	28		
29	G&O	P.B-L	B-L 70	U	4	No	Own	Own 16R	2F	R 10.0 99.0	Shu 16302	O2FM	600	TX	Own	8x3x1/4	C	120	82 1/2	34	44x3	54x4	29		
30	Own	D.B-L	B-L 70	U	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	LT4DV	674	TD	Ros	10 1/2 x3x1/4	P	159 1/2	88 3/4	34 1/2	42 1/2 x3	54 1/2 x4	30		
31	Lon	D.B-L	B-L	U	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	T41A	676	TD	Ros	8x3x1/4	P	162	99	36	40x3	54x4	31		
32	Own	D.B-L	B-L 60	U	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	T21H	288	RI	Ros	10x3 1/2 x1/4	T	159 1/2	88 3/4	34 1/2	42 1/2 x3	54 1/2 x4	32		
33	Per	D.B-L	B-L 60	U	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	O2/41A	TD	Own	10x3 1/2 x1/4	T	159 1/2	88 3/4	34 1/2	42 1/2 x3	54 1/2 x4	33			
34	Lon	D.Own	B-L 60 Max	A	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	O2/41A	TD	Own	10x3 1/2 x1/4	T	159 1/2	88 3/4	34 1/2	42 1/2 x3	54 1/2 x4	34			
35	Per	D.B-L	B-L 60 Max	A	4	No	Own	Tim 68720	WF	R 10.0 99.0	Shu 16302	O2/41A	TD	Own	10x3 1/2 x1/4	T	159 1/2	88 3/4	34 1/2	42 1/2 x3	54 1/2 x4	35			
36	Lon	P.B&B	B-L 60	U	4	No	P-S 4	Tim 68700DP	WF	R 11.7 111	Own	T41A	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	36		
37	Lon	P.B&B	B-L 60	U	4	No	P-S 4	Tim 68700DP	WF	R 11.7 111	Own	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	37		
38	Per	D.B-L	B-L 714	U	4	Op	Own	Wis 1700	2F	R 8.36 173.0	Wis	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	38		
39	Lon	D.Ful	Ful H 16	U	4	Op	Own	Wis 1700	2F	R 8.36 173.0	Wis	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	39		
40	Lon	D.Ful	Ful H 16	U	4	Op	Own	Wis 1700	2F	R 8.36 173.0	Wis	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	40		
41	Lon	D.Ful	Ful H 16	U	4	Op	Own	Wis 1700	2F	R 8.36 173.0	Wis	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	41		
42	Lon	D.Ful	Ful H 16	U	4	Op	Own	Wis 1700	2F	R 8.36 173.0	Wis	T21MV	603	RI	Gem	9 1/2 x3 1/2 x1/4	T	162	109	34	46x3	56x4	42		
43	Lon	D.Own	B-L 60 Max	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	43		
44	Lon	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	44		
45	Own	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	45		
46	Own	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	46		
47	Own	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	47		
48	Own	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32	54x3	52x4	48		
49	Own	D.Own	Mun	U	4	No	Own	Tim 68700DP	WF	R 10.1 95.0	Tim 16302	O4FXM	336	TX	Woh	8x3x1/4	C	117	78 1/2	32					

Line Number	Make, Model, and Capacity	General			Tire Size		Engine										Fuel System		Electrical System		Line Number						
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
Tractor-Trucks—Cont'd																											
1	(X) G. Mot. 4201 4-5 T.	1845	141	1845	20000	4725	P 32x6	DP32x6	Bulch	6-3 1/2 x 4 1/2	257.5	28.3	76-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	1	
2	(X) G. Mot. 4404 5-6 1/2 T.	2095	141	2095	25000	5095	P 34x7	DP34x7	Bulch	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	2	
3	(X) G. Mt. 6202 6 1/2-7 1/2 T.	3035	154	3035	27500	6925	P 34x7	DP34x7	Bulch	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	3	
4	(X) G. Mt. 6208 7 1/2-8 1/2 T.	3250	154	3250	34000	7150	P 36x8	DP36x8	Bulch	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	4	
5	(X) G. Mt. 8204 8 1/2-10 T.	3945	155	3945	37000	7835	P 38x7	DP40x8	Ow 331	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	5	
6	(X) G. Mt. 8206 10-12 T.	4055	155	4055	45000	7890	B 9.75/20	DP10.50/20	Ow 331	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	6	
7	(X) G. Mt. 9003 12-15 T.	5455	185	5455	50000	8775	P 34x7	DP34x7	Ow 331	6-3 1/2 x 5	331.4	33.7	94-2500	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	7	
8	Gramm. B118 3 Ton	1495	118	1495	118	1495	P 30x5	DP30x5	Lye 4SL	6-3 1/2 x 4 1/2	227.6	25.3	56-2700	L	G	2 1/2	8 1/4	4	PC	No	No	V	A-L	A-L	8		
9	Gramm. C122 4 Ton	1995	122	1995	122	1995	P 32x6	DP32x6	Lye ASA	6-3 1/2 x 4 1/2	278.6	31.5	85-2750	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	9		
10	Gramm. D122 5 Ton	2295	122	2295	122	2295	P 32x6	DP32x6	Lye TS	6-3 1/2 x 4 1/2	299.3	33.7	85-2700	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	10		
11	Gramm. E118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	11		
12	Gramm. F118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	12		
13	Gramm. G118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	13		
14	Gramm. H118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	14		
15	Gramm. I118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	15		
16	Gramm. J118 6 Ton	2118	118	2118	118	2118	P 34x7	DP34x7	Lye TS	6-3 1/2 x 5	353.8	36.2	90-2200	L	G	2 1/2	8 1/4	4	PC	No	No	M	A-L	A-L	16		
17	Hug. 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	17	
18	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	18	
19	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	19	
20	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	20	
21	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	21	
22	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	22	
23	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	23	
24	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	24	
25	Indiana 140	486	140	486	140	486	P 34x7	DP34x7	Bud DW6	6-3 1/2 x 5	331.4	33.7	73-2200	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	25	
26	International A-W-2	136	136	136	2980	2980	B 5.50/20	B 6.00/20	Wau XA	4-3 1/2 x 4 1/2	173	19.6	30-2700	L	G	2 1/2	8 1/4	4	PC	No	No	V	D-R	D-R	26		
27	International A-L-3	136	136	136	4300	4300	B 5.50/20	B 6.00/20	Lye 4SLH	6-3 1/2 x 4 1/2	224.0	25.3	56-2700	L	G	2 1/2	8 1/4	4	PC	No	No	V	D-R	D-R	27		
28	International A-4	145	145	145	5070	5070	P 32x6	DP32x6	Ow 331	6-3 1/2 x 4 1/2	279	31.5	65-2800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	28	
29	International A-5	140	140	140	5575	5575	P 34x7	DP34x7	Ow 331	6-3 1/2 x 5	279	31.5	65-2800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	29	
30	International A-6	210	210	210	5575	5575	P 34x7	DP34x7	Ow 331	6-3 1/2 x 5	279	31.5	65-2800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	30	
31	International HS-54	130	130	130	7675	7675	P 36x5	S 36x5	HaS 151	4-4 1/2 x 5 1/2	312	28.9	54-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	31	
32	International HS-54C	130	130	130	7900	7900	P 36x5	S 36x5	HaS 151	4-4 1/2 x 5 1/2	312	28.9	54-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	32	
33	International W-1	130	130	130	8100	8100	P 36x5	S 36x5	HaS 151	4-4 1/2 x 5 1/2	312	28.9	54-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	33	
34	International HS-74	144	144	144	9530	9530	P 36x5	S 36x5	HaS 152	4-4 1/2 x 5 1/2	390	36.1	60-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	34	
35	International HS-74C	146	146	146	9530	9530	P 36x5	S 36x5	HaS 152	4-4 1/2 x 5 1/2	390	36.1	60-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	35	
36	International HS-104	146	146	146	10100	10100	P 36x5	S 36x5	HaS 152	4-4 1/2 x 5 1/2	390	36.1	60-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	36	
37	International HS-104C	146	146	146	10425	10425	P 36x5	S 36x5	HaS 152	4-4 1/2 x 5 1/2	390	36.1	60-1800	HG	C	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	37	
38	Mack BL 2 Ton	2500	138	2500	138	2500	B 6.00/20	B 6.00/20	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	38	
39	Mack BG 3 Ton	3000	138	3000	138	3000	P 32x6	DP32x6	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	39	
40	Mack AB 5-6 Ton	3500	123	3500	123	3500	P 36x8	DP36x8	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	40	
41	Mack AB 5-6 Ton	3500	123	3500	123	3500	P 36x8	DP36x8	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	41	
42	Mack BC 6-8 Ton	4250	142	4250	142	4250	P 36x8	DP36x8	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M	D-R	D-R	42	
43	Mack BC 7-10 Ton	5500	142	5500	142	5500	P 36x8	DP36x8	Ow 331	6-3 1/2 x 5	248.9	25.4	63-2800	L	G	2 1/2	8 1/4	4	PC	Ha	Mar	M	M				

Line Number	Clutch		Gear Set		Universal Make and No.	Rear Axle				Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number				
	Type and Make	Make and Model	Location	No. of Forward Speeds		Aux. Locat. and Speeds	Wheels Driven	Final Drive and Type	Drive and Torque	Gear Ratios Reduc. in High	Gear Ratios Reduc. in Low	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame			Cab to Rear Axle	Width of Frame	Front	Rear
Tractor-Trucks—Cont'd																									
1	Lon	D.Own	Mun	U	4	No	Spl	Eat 1717	8 1/4	H	7.14	36.2	Eat 433F	B4IM	524	TX	Jac	6 1/4 x 3 1/2	107	59	34 1/2	38x2 1/2	50x3	N	1
2	Lon	D.Own	Mun	U	4	No	Spl	Eat T44 DR	WF	R	9.45	48.0	Eat 433F	B4IM	524	TX	Jac	6 1/4 x 3 1/2	107	59	34 1/2	38x2 1/2	50x3	N	2
3	Lon	D.Own	Mun	U	4	No	Spl	Tim 65706	WF	R	10.7	65.9	Eat 527 F	B4IM	687	TX	Jac	9 1/2 x 3 1/2	125	69	34 1/2	40x3	54x3	N	3
4	Lon	D.Own	Mun	U	4	No	Spl	Tim 65706	WF	R	10.7	65.9	Eat 527 F	B4IM	687	TX	Jac	9 1/2 x 3 1/2	125	69	34 1/2	40x3	54x3	N	4
5	Lon	D.Own	Mun	U	4	No	Pet	Tim 66704	WF	R	12.3	171	Eat 527 F	B4IM	795	TX	Jac	9 1/2 x 3 1/2	125	70	34 1/2	40x3	54x3	N	5
6	Lon	D.Own	Mun	U	4	No	Pet	Tim 66704	WF	R	12.3	171	Eat 527 F	B4IM	795	TX	Jac	9 1/2 x 3 1/2	125	70	34 1/2	40x3	54x3	N	6
7	Per	D.Jon	Cov A-4J	U	4	No	Blo	Tim 56000	BF	H	6.3	41.0	Col 4003	L4IH	...	TX	Ros	6 1/2 x 2 1/2	...	38 1/2	34	40x3	54x3	N	7
8	Per	D.Jon	Cov W4J	U	4	No	Blo	Tim 56000H	BF	H	6.3	41.0	Col 5500	L4IH	...	TX	Ros	6 1/2 x 2 1/2	...	38 1/2	34	40x3	54x3	N	8
9	Per	D.Jon	Cov Rus	U	4	No	Blo	Wis 6617B	BF	H	6.3	41.0	Col 5500	L4IH	...	TX	Ros	6 1/2 x 2 1/2	...	38 1/2	34	40x3	54x3	N	9
10	Per	D.Jon	Cov Rus	U	4	No	Blo	Wis 12527KW	2F	H	7.08	71.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	128 1/2	73	36	46x3	58x3 1/2	N	10
11	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	11
12	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	12
13	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	13
14	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	14
15	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	15
16	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	16
17	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	17
18	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	18
19	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	19
20	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	20
21	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	21
22	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	22
23	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	23
24	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	24
25	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	25
26	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	26
27	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	27
28	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	28
29	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	29
30	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	30
31	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	31
32	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	32
33	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	33
34	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	34
35	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	35
36	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	36
37	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	37
38	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	38
39	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	39
40	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	40
41	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	41
42	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	42
43	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	43
44	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	44
45	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	45
46	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	46
47	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	47
48	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	48
49	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	49
50	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	50
51	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	51
52	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	52
53	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	53
54	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	54
55	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	55
56	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	56
57	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	57
58	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	58
59	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	59
60	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	60
61	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0	Tim	41A	864	CD	Ros	7 1/4 x 3 1/2	138	83 1/2	...	...	...	N	61
62	G&O	D.Own	Mun	U	4	No	Spl	Tim 54000	2F	H	6.3	41.0													

KEY OF REFERENCES

GENERAL

Gross Vehicle Weight—Chassis weight, plus body and cab, plus pay load.
Chassis Price is for truck with standard wheelbase listed and with tires listed F.O.B. factory, unless otherwise specified.

b—Price of Mack AC 7-10 ton, \$4,950, tires, 8 36x5, D8 40x5; 11-14 ton, \$5,500, tires, 8 36x6, D8 40x6; 15 ton, \$6,000, tires 8 36x7 D8 40x7.

TIRES

B—Balloons.
DB—Dual Balloons standard equipment.
P—High Pressure Pneumatics standard equipment.
DP—Dual High Pressure Pneumatics standard equipment.
S—Solids.
DS—Dual Solids.
—Pneumatics furnished at extra cost.

ENGINE

Make

Bud—Buda Company.
Con—Continental Motors Corp.
Has—American Car & Fdy. Co.
Her—Hercules Motor Corp.
Lyc—Lycoming Motor Corp.
Wau—Waukesha Motor Co.
Wis—Wisconsin Motor Mfg. Co.

Valve Arrangement

H—In head.
L—"L" Head.
S—Sleeve.
T—"T" Head.

Camshaft Drive

C—Chain.
G—Gear.

Piston Material

A—Aluminum alloy.
B—Semi-steel.
C—Cast iron.
N—Nickel iron.
S—Aluminum alloy with strut.

Main Bearings

r—Rear main bearing.

Oiling System

CC—Pressure to main, connecting rod and camshaft bearings.
FP—Pressure to main, connecting rod, camshaft bearings and piston pins.
PC—Pressure to mains and connecting rod bearings.
PG—Pump, gravity and splash.
PS—Pressure with splash.
SP—Circulating with splash.

Governor

Bf—Bethlehem Fabricators, Inc.
Bu—Buda.
Co—Continental.
Ha—Handy Governor Co.
HS—Amer. Car & Fdy. Co.
KP—Handy Governor Co.
Mo—Monarch.
No—Not supplied.
On—Own.
Op—Optional.
Pe—Pierce Governor Co.
Si—Simplex (Elsemann Magneto Corp.).
St—Sterling.
Wa—Waukesha.

Radiator

Bus—Bush Mfg. Co.
Chi—Chicago Mfg. Co.
Fed—Fedders Mfg. Co.
G&O—G & O Mfg. Co.
Har—Harrison Rad. Corp.
Hex—Hexcel Rad. Co.
Lon—Long Mfg. Company.
McC—McCord Rad. & Mfg. Co.
Mod—Modine Mfg. Co.
Per—Perfex Corp.
R-T—Rome-Turney Rad. Co.
You—Young Rad. Company.

FUEL SYSTEM
Carburetor Make

Car—Carter Carburetor Co.
Joh—Johnson.

Mar—Marvel Carburetor Co.
Sch—Wheeler Schebler Co.
Sto—Detroit Lubricator.
Str—Stromberg Motor Dev. Co.
Tit—Tillotson Mfg. Co.
Zen—Zenith-Detroit Corp.

Fuel Feed

E—Electric Pump.
G—Gravity.
M—Mechanical Pump.
P—Pressure.
V—Vacuum.

ELECTRICAL SYSTEMS

A-Bo—Amer. Bosch Magneto Co.
R-Bo—Robert Bosch Magneto Co.
Apo—Apollo Magneto Corp.
D-R—Delco Remy Company.
Eis—Elsemann Magneto Corp.
L-N—Leece-Neville Co.
N-E—North East Elec. Co.
Spi—Splittorf Electrical Co.
1—Generator and Starter at extra cost.
2—Starter not supplied. Generator at extra cost.
3—Starter at extra cost.

CLUTCH

Type

D—Multiple disk.
dp—Double Plate.
O—Plate in oil.
P—Single plate.

Make

B&B—Borg & Beck Co.
B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
H-S—Merchant & Evans Co.
Jon—Jones Clutch & Gear Co.
Lon—Long Mfg. Company.
M-E—Merchant & Evans.
M.M.—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
Roc—Rockford Drill Machine Co.
W-G—Warner Gear Co.

GEARSET

Make and Model

B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
M.M.—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
W-G—Warner Gear Co.
War—Warner Corp.

Location

A—Amidships.
J—Unit with jackshaft.
U—Unit with engine.

Auxiliary, Location

No—Not furnished.
Op—Optional at extra cost.
A—Amidships.
R—Rear of amidships main transmission.
U—Unit with engine.

UNIVERSAL JOINTS

Blo—Blood Bros. Mach. Co.
B-C—Blood and Cleveland.
Cle—Cleveland Steel Prod. Corp.
Har—Spicer Mfg. Co.
Lon—Long Mfg. Company.
PeS—Peters and Spicer.
Pet—Peters.
P-S—Peters and Sneed.
S-C—Spicer and Cleveland.
Spi—Spicer Mfg. Co.
S-P—Superior Universal Products Co.
SpB—Spicer and Blood Bros.
SpP—Spicer and Pick.
S-T—Spicer & Thermold.
U-M—Universal Machine Co.
U-P—Universal Products Co.

REAR AXLE

Make

Cla—Clark Equip. Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salisbury Axle Co.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

Final Drive and Type

B—Bevel.
C—Chain.
D—Dead.
I—Internal Gear.
2—Double Reduction.
R—Relay—Pendulum Drive.
S—Spiral Bevel.
W—Worm.
1/2—Semi-Floating.
3/4—Three-Quarter Floating.
F—Full Floating.

Drive and Torque

H—Hotchkiss.
R—Radius Rods.
T—Torque Arm.
U—Torque Tube.
O—Radius Rods Optional.

WHEELS DRIVEN

2—Forward pair of rear wheels.
4F—Front and forward pair of rear wheels.
4R—Four rear wheels.
6—Six wheels.

FRONT AXLE

Make and Model

Shu—Shuler Axle Co., Inc.
Cla—Clark Equipment Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salisbury Axle Co.
She—Sheldon.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

BRAKES—Service
Make

B—Bendix.
BE—Bendix front, Eaton rear.
BO—Bendix front, Own rear.
C—Columbia.
K—Clark.
L—Lockheed.
LO—Lockheed front, Own rear.
O—Own.
OE—Own front, Eaton rear.
OW—Own front, Wisconsin rear.
S—Steeldraulic.
T—Timken.
W—Wisconsin.
Ws—Westinghouse.

Y—Chevrolet utility model with dual 30x5 rear tires lists at \$545.00.

(X) General Motors Trucks. Gross vehicle weight indicated for each model in table is the *Straight Rating* (combined weight of chassis, body, equipment and payload) for which chassis is designed and guaranteed to satisfactorily operate under average conditions. The size of the tires used does not affect this Straight Rating, but to secure maximum tire mileage it is suggested that the total gross weight be limited to a "recommended gross weight" for each tire equipment (type number) based on the capacity. Chassis prices vary with wheelbase and tire combinations. The range of "recommended gross weights," type numbers and resulting payload range (assuming nominal body allowance) for each model follow.

Note: Models T-15 to T-60 inclusive, as well as Models TX and WX, are available for Export only as coach chassis.

MODEL	RANGE OF RECOMMENDED GROSS WEIGHTS (LBS.)	TYPE NUMBERS	RANGE OF PAYLOAD (TONS)
T-11	3800	1001	1/2
T-15	5400 to 6500	1501 to 1708	3/4
T-17	5500 to 6500	1701 to 1708	1 to 1 1/4
T-19	6500 to 8500	2201 to 2223	1 to 2
T-25	6800 to 9000	2501 to 2518	1 to 2
T-30	9000 to 12500	3201 to 3215	1 1/2 to 3
TX-186 1/2	14000	Export Coach	.....
WX-185	14500	Export Coach	.....
T-42	10600 to 15000	4201 to 4212	2 to 4
T-44	10600 to 16000	4401 to 4412	2 to 4 1/2
WX-215	17000	Export Coach	.....
T-60	14500 to 22000	6201 to 6218	2 1/2 to 6
T-82	15500 to 24000	8201 to 8212	3 to 7
T-90	22000 to 28000	9001 to 9007	5 to 7 1/2

Location

2—Two Wheel.
4—Four Wheel.
6—Six Wheel.
2/4—Two wheel brakes effective on all four wheels through driveshaft.
F—Driveshaft effective on four wheels.
J—Jackshaft.
P—Propeller shaft.
P/4—Propeller shaft effective on four wheels.
r—Four rear wheels.

Type

I—Internal.
Y—Internal front and external rear.
X—External.

Method of Operation

A—Air.
D—Hydraulic and mechanical.
H—Hydraulic.
M—Mechanical.
V—Vacuum.

BRAKES—Hand

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
R—Worm or bevel gear shaft.
T—Transmission.
F—Driveshaft.

Type

D—Disk.
I—Internal.
X—External.
Y—Internal front and external rear.

STEERING GEAR

Make

CAS—Columbus G. & P. Co.
Gem—Gemmer Mfg. Co.
Han—Hannum Mfg. Co.
Jac—Saginaw Steering Gear Div. General Motors Corp.
Lav—Hannum Mfg. Co.
Ros—Ross Gear & Tool Co.
Woh—Wohlrab Gear Co.

FRAME

Type

C—Channel.
I—"I" Beam.
P—Channel reinforced with plate.
T—Side rails tapered front and rear.

SPRINGS—Auxiliary

Type

1/2—Semi-elliptic above or below main springs.
1/4—Quarter elliptic.
C—Coil spring.

THIS SINGLE
FACT SETTLES
THE QUESTION
"Which Balloon?"

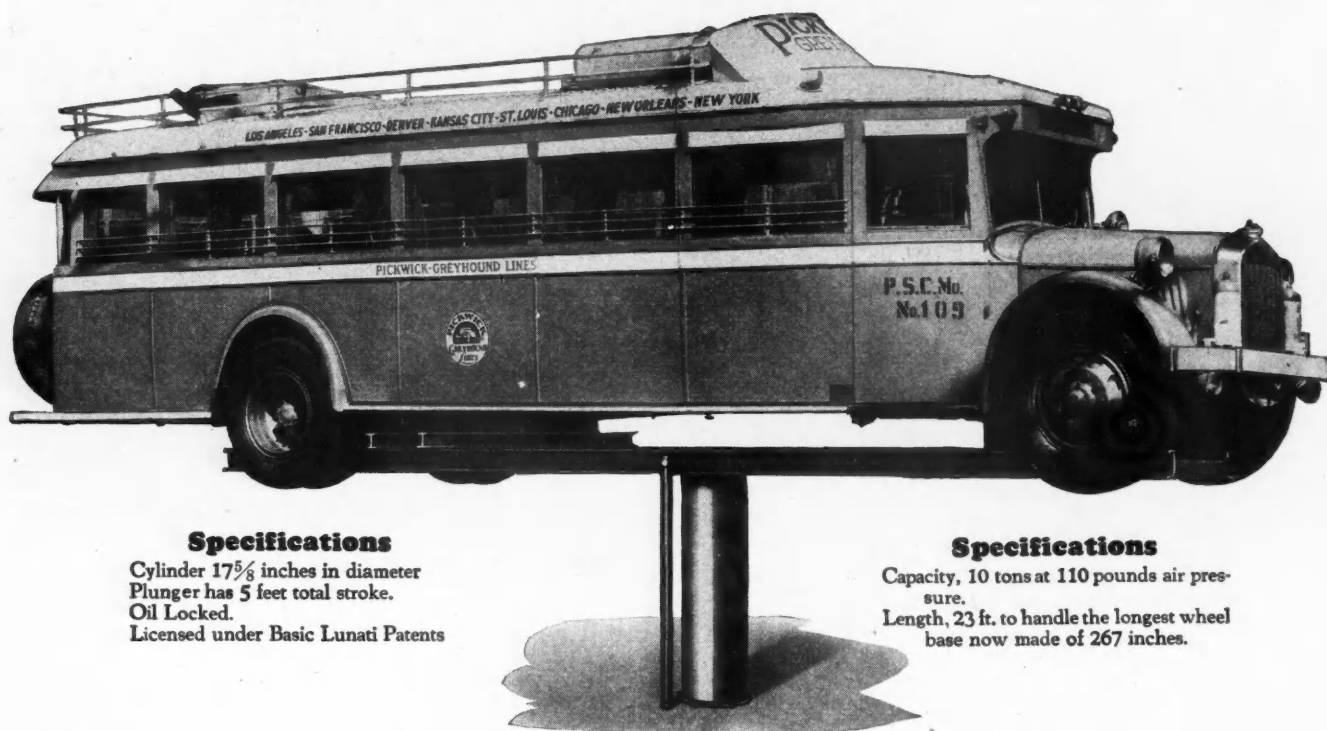


MORE GENERAL
TRUCK BALLOONS
ARE SOLD THAN
ANY OTHER
MAKE

With the increasing number of operators changing to balloons in every field, the *General Truck Balloon* is the big majority choice ▲▲ On the cold basis of performance this revolutionary new tire has *earned* its way into whole fleets ▲▲ "Trial-tested" by thousands of truck owners on their toughest jobs—usually where other types and makes of tires have *failed*—the General Balloon has proved conclusively that it solves and controls the most stubborn operating problems ▲▲ That's why from the most critical of all juries comes this nationwide verdict: "*More General Truck Balloons are sold than any other make*" ▲▲ Ask your General Tire Dealer for facts and figures on a change-over for *your* trucks. The General Tire & Rubber Company, Akron, O.

The
GENERAL
TRUCK BALLOON
—goes a long way to make friends

New CURTIS-built TRUCK and BUS Lift!



Specifications

Cylinder $17\frac{5}{8}$ inches in diameter
Plunger has 5 feet total stroke.
Oil Locked.
Licensed under Basic Lunati Patents

Specifications

Capacity, 10 tons at 110 pounds air pressure.
Length, 23 ft. to handle the longest wheel base now made of 267 inches.

WITH a lifting capacity of 20,000 pounds, and a platform length of 23 feet, this new Curtis Truck and Bus Lift will handle the heaviest and longest trucks or single-deck buses made.

It lifts the vehicle by front and rear axles, leaving the wheels hanging free for easy brake and wheel adjustments.

The Curtis Bus Lift is of a single-cylinder post type. It can be rotated to a full 360 degrees, which permits the vehicle to be driven forward both going on and off the lift. Installation cost is less and uniformity of lifting and lowering speed is assured.

The Curtis Truck and Bus Lift provides complete certainty of safety through:

1. Tremendous structural strength—400 to 500% safety factor provided in all parts. The plunger itself is $17\frac{5}{8}$ " in diameter.

Mail this coupon to

Curtis Pneumatic Machinery Company

1929 Kienlen Ave., St. Louis—518-H Hudson Term., N. Y.

Please send data sheet and information about the new Curtis Truck and Bus Lift.

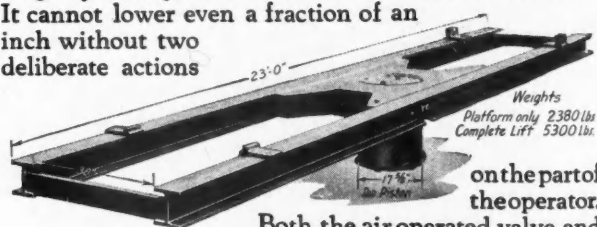
Name _____

Address _____

F1

2. The electrically welded platform is made of tremendously strong H-beams, capable of standing five times the weight called for by lift's capacity.

3. All oil, no air in the cylinder. Being both lifted and locked by incompressible oil, at any height you stop the lift it is as solid as if on concrete. It cannot lower even a fraction of an inch without two deliberate actions



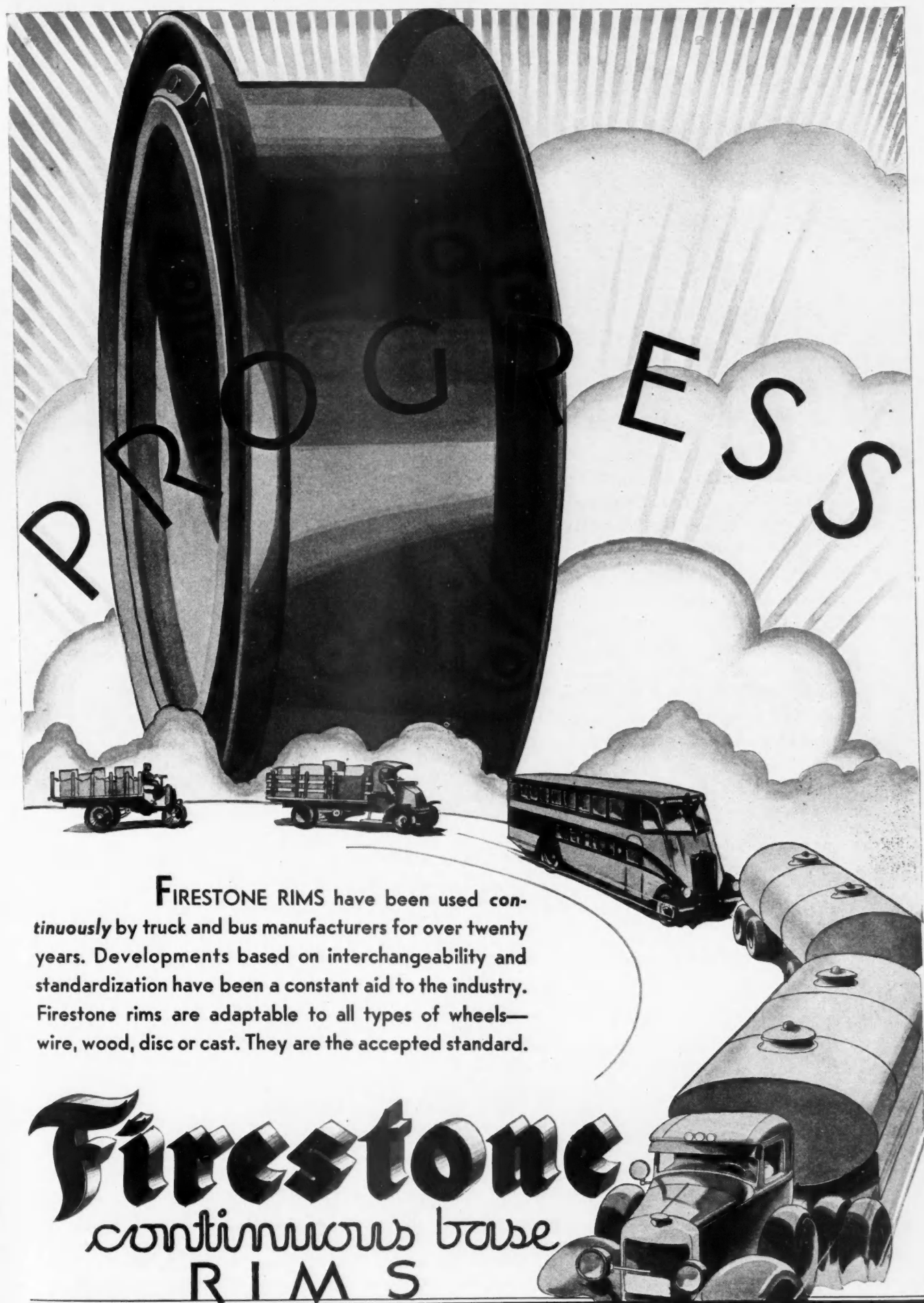
Both the air operated valve and oil lock valve must be opened before lowering can start and *neither of these controls are under the lift.* The Curtis Lift is super-safe.

4. A safety retard valve automatically and positively governs the lowering speed.

5. A safety leg furnished without extra cost is an extra safety feature.

6. Elimination of fire hazard from heavy gasoline fumes in pits.

Complete details of this new Curtis Truck and Bus Lift are given on an illustrated data sheet now ready. Mail the coupon for it and ask for any other special information you would like to have.



PROGRESS

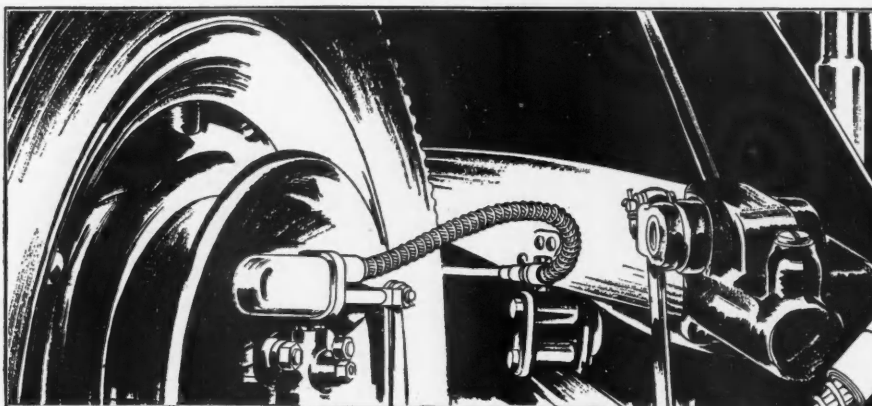
FIRESTONE RIMS have been used *continuously* by truck and bus manufacturers for over twenty years. Developments based on interchangeability and standardization have been a constant aid to the industry. Firestone rims are adaptable to all types of wheels—wire, wood, disc or cast. They are the accepted standard.

Firestone
continuous base
RIMS

Copyright, 1930, The Firestone Steel Products Co.

The Commercial Car Journal

January, 1931



SIMPLE and EFFICIENT

Tru-Lay Brake Controls are simple because there are in fact only two units . . . an inner preformed strand and an outer housing. No clevises or pins to wear out. No lubrication. The actuating strand slides in a bath of grease.

Note the simplicity. One end is anchored to the side of the frame. The other end fits into the brake housing. With straight-ahead wheel position the Tru-Lay Brake Control assumes a slight S-shape and straightens out slightly as the wheel is turned. The length remains constant. Therefore the adjustment remains constant.

Tru-Lay Brake Controls may be designed to operate with any mechanical brake. Over 2,000,000 Tru-Lay Brake Controls are now in use.

Let us give you full information. Our engineers are on the ground to work with your engineers. Address:

AMERICAN CABLE COMPANY, Inc.

AUTOMOTIVE DIVISION

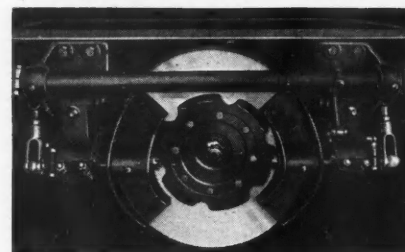
BRIDGEPORT, CONNECTICUT

Detroit Office: General Motors Building

An Associate Company of the
American Chain Company, Inc.



TRU-STOP BRAKE

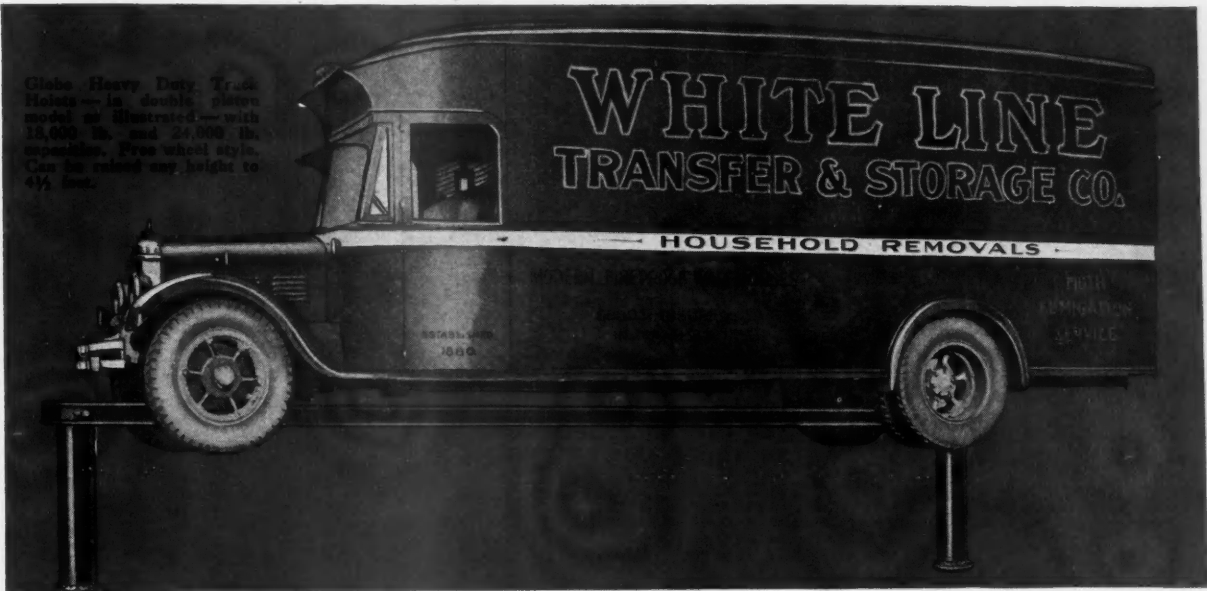


A dependable emergency brake. Self-ventilation prevents burned linings. Powerful leverage squeezes both sides of the brake disc . . . balancing the forces and providing braking power sufficient to stop any loaded truck or bus independent of service brakes.

All standard transmissions have provisions for mounting Tru-Stop Emergency Brakes.

A REAL EMERGENCY BRAKE

TRU-LAY MECHANICAL BRAKE CONTROL



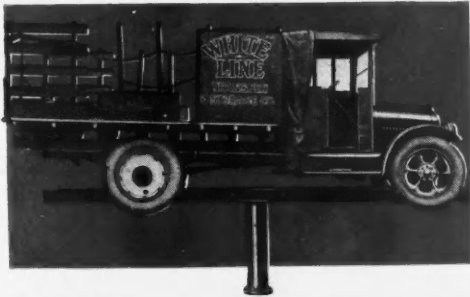
Globe Heavy Duty Truck Hoists—in double piston model as illustrated—with 12,000 lb. and 24,000 lb. capacities. Free wheel style. Can be raised any height to 4 1/2 feet.

SPEED UP!

... Quicker Shop Work Means More Profit Hours

A Globe Truck Hoist will keep your trucks working at a profit for you *more hours each and every week!* And Globe will cut down shop time spent on maintenance—overhauling—lubricating—washing. Whether it's a general inspection, a brake adjusting job, a tire change or most any work around your shop—you can put your trucks up on a Globe Truck Hoist to any height that's handy—giving plenty of light and room to turn out a good job.

And because Globe pistons ride on oil—not in it, you can hold the job there safely and solidly without shaking or tipping, until the work is finished. You'll find Globe Truck Hoists always UP—*speeding up* shop work, never DOWN for repairs.



Globe Single Piston Truck Hoist—12,000 lb. capacity. One of the complete line of Globe Cup Leather Principle Auto, Bus and Truck Hoists.

Globe Truck Hoists are especially designed for heavy duty service. They furnish the safe way to eliminate the dark, damp pits, the crowded, cramped racks, which invite shop slip-ups resulting in road break downs and profit stealing delays.

Globe insures thorough jobs, turned out easier, quicker and at a lower cost. Requires no extra shop space. On differential replacements, gear set removals and the like, a turn of the valve brings the job up just where you want it. There's no repeated raising, blocking, and lowering to disconnect necessary parts.

Globe Truck Hoists are Underwriter approved and Super safe. The pistons ride ON a column of oil. An automatic safety lock comes as standard equipment. Before any job at full height can be lowered, the lock must be released by hand.

Investigate this labor saving tool. Learn how it can speed up shop work—can cut down maintenance costs.

See your jobber today or write us.

GLOBE MACHINERY & SUPPLY CO.
209 W. COURT AVE. DES MOINES, IOWA

GLOBE Truck HOIST

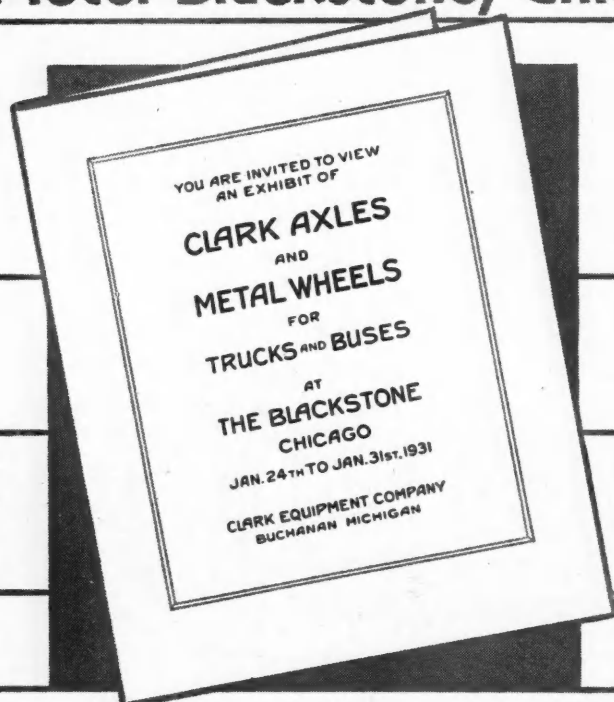
REG. U.S. PAT. OFFICE

THE CUP LEATHER HOIST

Globe Machinery & Supply Co.,
209 W. Court Ave., Des Moines, Iowa
Without obligation, send details of Globe Truck Hoists and Cup Leather Principle.
Company Name
Town
State



**Inspect its design and construction at the
Hotel Blackstone, Chicago, Jan. 24 to 31, 1931**



**We will also show our
complete Co-ordinated
Running Gear**

AXLES - front and rear
Bendix or Hydraulic brakes optional

METAL WHEELS
Single and Dual

TRANSMISSIONS

Latest Type Passenger Car AXLE HOUSINGS will be shown

The Mark Of DEPENDABILITY IN PISTON RINGS



AND IT ALWAYS WILL BE



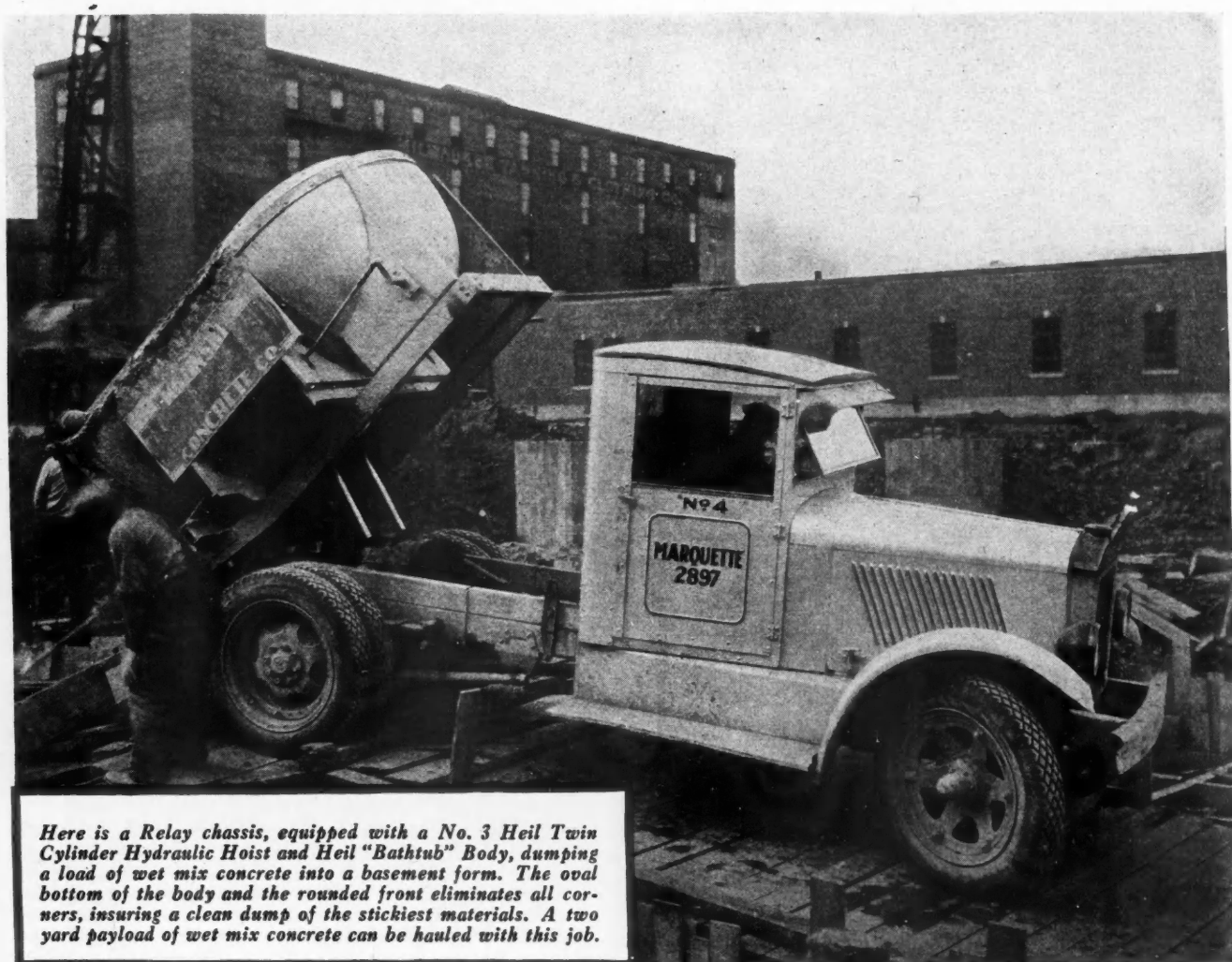
THE PISTON RING COMPANY ♦ MUSKEGON MICHIGAN

The Commercial Car Journal

January, 1931

HEIL

Do you know that Heil Hydraulic Hoists carry a two year factory guarantee—made possible by the trouble free service record of thousands of Heil Hoists and Bodies used by progressive dump truck operators from New York to San Francisco and all points between—Write today for the new Heil Hoist, Body and Tank Manual—Address The Heil Co., 3003 W. Montana St., Milwaukee, Wis.



Here is a Relay chassis, equipped with a No. 3 Heil Twin Cylinder Hydraulic Hoist and Heil "Bathtub" Body, dumping a load of wet mix concrete into a basement form. The oval bottom of the body and the rounded front eliminates all corners, insuring a clean dump of the stickiest materials. A two yard payload of wet mix concrete can be hauled with this job.

DESIGNED TO STAND ABUSE... *that's why* GUNITE DRUMS MAKE A CLEAN SWEEP OF BRAKE TROUBLES

"HOW do they do it?" That's the question bus or truck operators ask when they find their Gunitite Drums rolling up new mileage records. New records for drums—new records for linings—new records for costs. "How do they do it?"

The answer to that question is the answer to the three major causes of brake troubles—WEAR, HEAT, DISTORTION.

WEAR—Gunitite uses the best wear-resisting drum material known—*air furnace pearlitic iron*. This takes care of the wear.

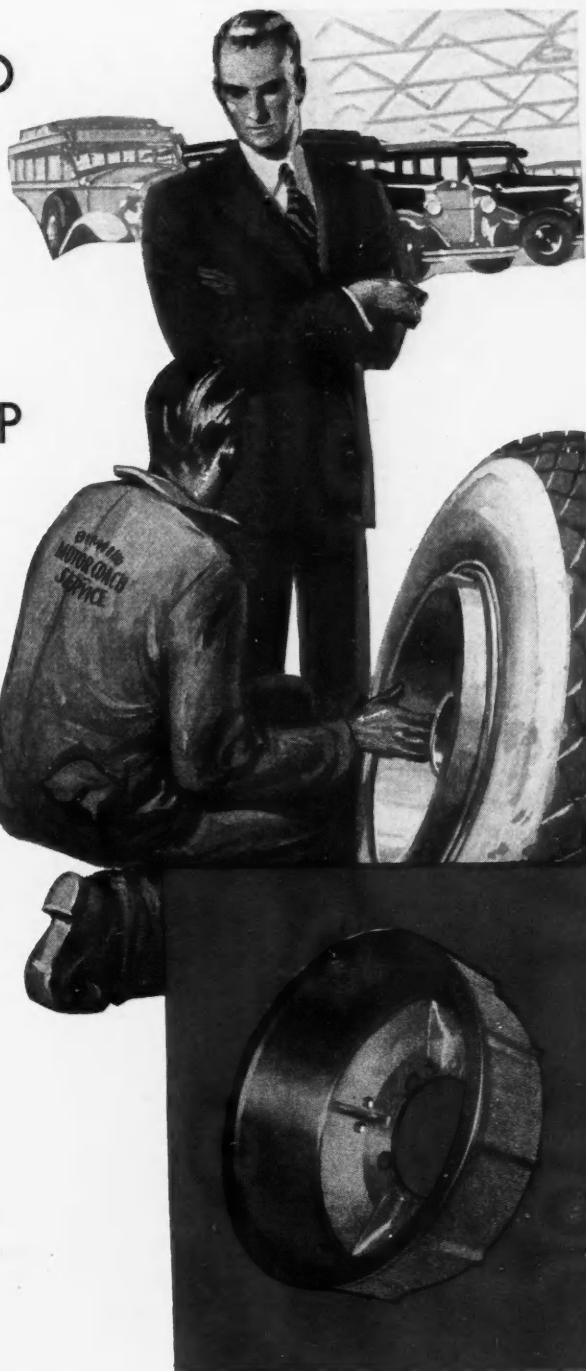
HEAT—Gunitite uses cooling fins intelligently designed to dispel heat by conduction as well as radiation—the heat that injures linings, expands drums, renders brakes powerless.

DISTORTION—To lick this problem you need strength and rigidity. Gunitite has *twice the strength* of ordinary drum materials. That's why Gunitite Drums don't distort, don't bulge, don't "bell" under modern high braking pressures.

Why not make a clean sweep of brake troubles—put Gunitite Drums on every bus or truck you operate. You'll save in gained operating time, lower costs, and you'll have brakes you can depend on for mile after mile of gruelling punishment.

One Southern bus company whose coaches average eight stops per mile is getting over 150,000 miles to each set of Gunitite Drums. Their drum and lining cost per mile is exceptionally low. Is yours? Why not test out a set of Gunitite Drums—the results may surprise you. Get them for any model bus or truck. Specify them, too, on new equipment. THE GUNITE CORPORATION, Rockford, Illinois.

GUNITE BRAKE DRUMS



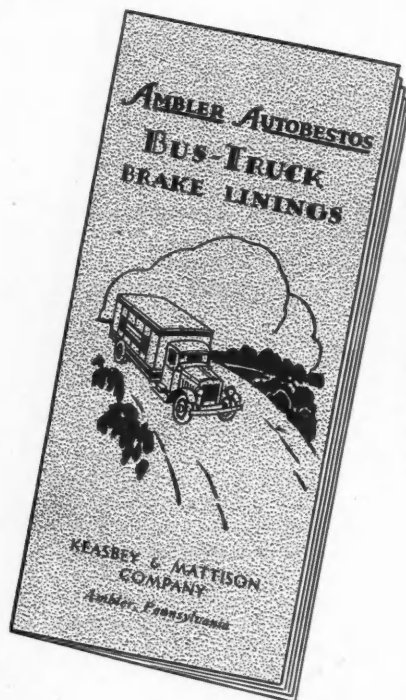
WHAT MAKES A GUNITE DRUM BETTER?

Brake lining companies, automotive engineers both recognize *air furnace pearlitic iron*—or Gunitite—as the best material for brake drum purposes.

Their opinion is a result of years of experience and is based on actual performance records on the road and in the laboratory. Longer wear from close-grained air furnace iron. No distortion because of a 50,000 pound tensile strength. These facts, coupled with intelligent design to eliminate heat troubles, make these Gunitite Drums better. Write for your copy of our latest catalog explaining this in detail.



5 TYPES of
Bus-Truck Lining
Are Needed to
Service Today's
Trucks and
AMBLER
AUTOBESTOS
Supplies Them All



This new booklet describes Keasbey & Mattison Company's Bus-Truck Linings and their application to modern braking conditions. The information it contains should be of interest to every truck operator regardless of the kind of lining now being used. Write for a copy. It places you under no obligation.

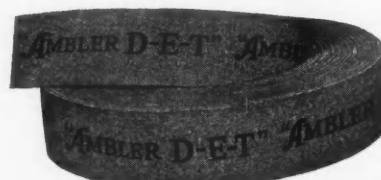
**KEASBEY & MATTISON
COMPANY.**
Ambler Pennsylvania

**Ambler Autobestos
Blue Brand Bus-Truck**



A dense, highly compressed woven lining for internal and external brakes. Developed for high carbon heat treated drums or heat treated cast steel drums. Suitable for vehicles with booster brake equipment.

**Ambler Autobestos
D-E-T**



D-E-T, a custom built lining furnished only on order. A hard lining not recommended for general use, but unusually serviceable where conditions require an extraordinary or super-brake lining.

**Ambler Autobestos
Improved Molded**



Ambler Autobestos Improved Molded contains no rubber or vegetable products affected by heat or weather. In segments of exact dimensions. Marketed in groups or sets.

**Ambler Autobestos
Regular Brown**



Made of the same asbestos yarn as Bus-Truck, but not as tightly woven. A softer more pliable lining that's very effective with light, pressed drums.

**Ambler Autobestos
Winmor**



Designed to preserve and improve smooth surface of low carbon steel drums. A long wearing lining that is especially suitable for light trucks.

"World's most powerful truck"

equipped with Dayton Duals

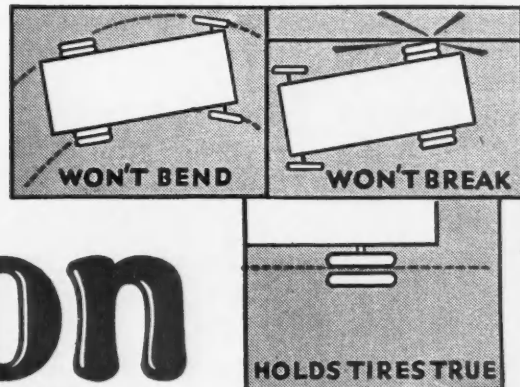


The super-powerful Relay Duo-Drive featuring two straight eight cylinder engines is equipped with six Dayton Steel Wheels . . . four Dayton Duals in the rear . . . two Dayton Singles in front.

Again Dayton pioneers! From the beginning of the steel wheel industry, Dayton has pioneered the way . . . and the remarkable performance records reported annually for more than 20 years have made them standard equipment on the world's finest makes of trucks. Now the Dayton Dual is standard equipment on the first dual-engine motor truck.

This truck has amazing power and speed, and its wheels must be right in every respect. The safety factor of any truck is no greater than the safety factor of its wheels. Dayton Duals are built to give safe, fast, profitable service. You can depend on them to do their job always no matter how tough that job may be. Specify Dayton Duals on changeovers, and on your new trucks.

THE DAYTON STEEL FOUNDRY COMPANY
DAYTON, OHIO



Dayton Brake Drums
are Superior in Strength and Wearing Qualities. The metal, made by a special process in electric furnaces, has an even distribution of graphitic carbon. Dayton Brake Drums last longer, stay smooth and save brake linings.

Dayton

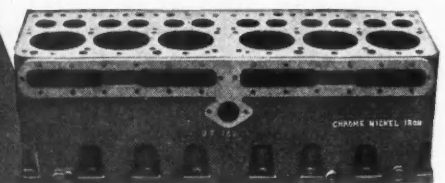
The Mark of a Good Wheel

AUTOCAR ENGINES REDUCE LONG DISTANCE HAULING COSTS... THEY HAVE NICKEL CAST IRON CYLINDERS

Trucks designed for heavy duty service on long distance hauls must prove their year-round dependability. High, continuous speeds...rough going in the country...city traffic—these conditions call for parts that will render superior performance.

The Autocar Company has adopted Nickel Cast Iron cylinder blocks as a means of assuring improved engine performance and, consequently, reduced mileage costs. Nickel Cast Iron combines a high degree of wear-resistance with increased strength and toughness—characteristics unobtainable in ordinary gray cast iron. Nickel Cast Iron cylinder blocks perform better longer because there is less tendency to wear along the bores...less trouble from hammering-in of valve seats.

Below: Nickel Cast Iron cylinder block used in Model TB "Autocar" truck manufactured by THE AUTOCAR CO., Ardmore, Pa. Cylinder cast by Ferro Machine and Foundry Co., Cleveland, O.

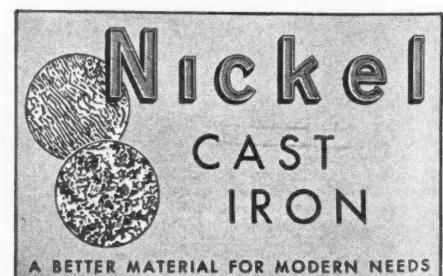


THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

Miners, refiners and rollers of Nickel...Sole producers of Monel Metal



Our casting specialists will gladly discuss your problems with you



New Year's Greetings to the trade from—

• LA FRANCE-REPUBLIC •

LA FRANCE-REPUBLIC enjoys a large and steadily increasing business in the States and overseas—in every country where La France-Republic distributors and dealers are offering this popular line to truck buyers.

To our distributing organization at this time we bid the New Year's greetings, wishing for them that full measure of prosperity which we here at the factory make every effort to bring about.

La France-Republic offers a truck for every transportation need and a price range to meet all purses.

Model A—1 ton capacity—Bevel Drive	\$ 795.00
Model C—1½ ton capacity—Bevel Drive	1,295.00
Model D—2 ton capacity—Bevel Drive	1,595.00
Model F—3 ton capacity—Bevel Drive	2,395.00
Model H—4 ton capacity—Double Reduction.....	2,985.00
Model M—5 ton capacity—Double Reduction.....	4,000.00
Model 35-2—7 ton capacity—Double Reduction.....	5,600.00
Chief—2-2½ ton capacity—Worm Drive.....	3,650.00
Chieftain—3-4 ton capacity—Worm Drive.....	5,500.00

La France-Republic Corporation

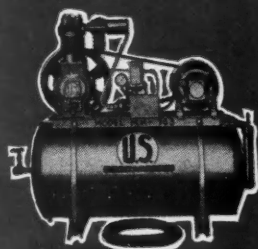
Alma, Michigan, U. S. A.

Cable Address: "Republic Alma Mich"



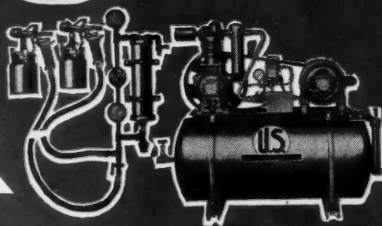
Maintenance becomes Less a problem with U. S. Service Equipment

FOR LOW COST COM-
PRESSED AIR OPERATIONS—



U. S. Model MK-763
Heavy Duty
Air Compressor

FOR FASTER,
MORE EFFICIENT SPRAY PAINTING—



U. S. Model PSE-26
two-gun
paint spray unit

FOR DEPENDABLE HIGH PRESSURE GREASING—



New and im-
proved electric
high pressure
grease gun

FOR EFFICIENT TRUCK AND BUS WASHING—



Model AW-2
two-gun heavy
duty Hydraulic
Car Washer

BECAUSE efficient service equipment is so vital to low maintenance costs . . . "maintenance-wise" bus and truck operators from Bangor to Puget Sound have standardized on U. S. Equipment. ▲ The units shown above are only a few of many. Send the coupon. ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲ ▲

U.S. AIR COMPRESSOR COMPANY

5358 HARVARD AVENUE • CLEVELAND, OHIO

WEST COAST BRANCH:

433 West Pico Street • Los Angeles, California

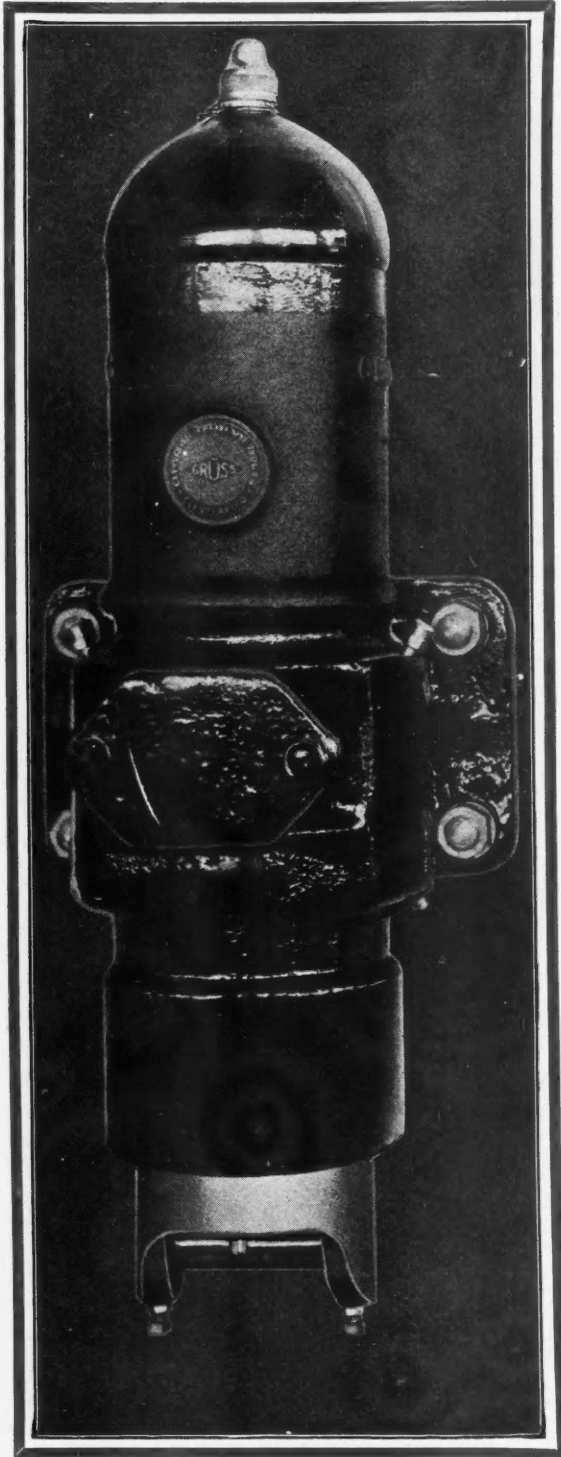
THE U. S. AIR COMPRESSOR CO.
5358 Harvard Avenue

I am interested in items checked below:

- | | |
|--|--|
| <input type="checkbox"/> Air Compressors | <input type="checkbox"/> Paint Spray Units |
| <input type="checkbox"/> Car Washers | <input type="checkbox"/> Grease Gun |

Name _____

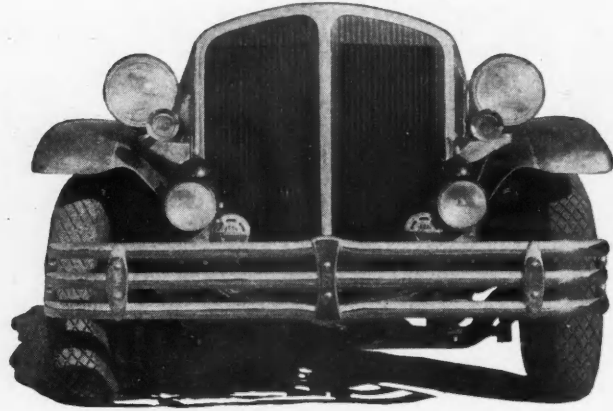
Address _____



Cleco-Gruss Air Springs are Standard or Optional Equipment on the Following Commercial Vehicles:

A. C. F.
MACK
STUDEBAKER
YELLOW COACH
RELAY
GILFORD (BRITISH)
FLEXIBLE
BROCKWAY-INDIANA
WHITE

DAY-ELDER
FEDERAL
G. M. C.
GRAMM
INTERNATIONAL
REHEBERGER
STERLING
STEWART
WILLYS-KNIGHT
(Export)



Selected for the Relay Duo-Drive 300-A

NOT least among the qualities that make the Relay Duo-Drive 300-A the outstanding transportation development of the year is the extra-protection afforded this already-rugged locomotive of the highways by its Cleco-Gruss Air Springs. + +

Equipped with Mogul Size Air Springs, the Relay 300-A guarantees its operators maximum relief from steel spring breakage, radiator maintenance, tire bruises and the general wear and tear on chassis and body that results from unabsorbed shock and vibration. + + + + +

Relay Motors is to be congratulated upon the production of a unit that bids fair to set a new standard of motorized transportation. + + + + +

CLECO AUTOMOTIVE PRODUCTS

MANUFACTURED BY THE CLEVELAND PNEUMATIC TOOL CO., CLEVELAND, OHIO

THE SILVER KING

AN EXCEPTIONALLY HIGH QUALITY Hydraulic Jack

AT AN
UNUSUALLY LOW PRICE

SILVER KING Hydraulic Jacks have a one-piece CERTIFIED MALLEABLE body, designed for extreme strength and simplicity, as well as the elimination of leakage in the housing.

They are extremely simple in construction, fast in service and all models are equipped with a safety by-pass which prevents pressure building up after the lifting ram has reached the limit of its travel. A conveniently placed release valve permits lowering the jack by the weight of the vehicle and also provides an attachment for pulling the jack from underneath the vehicle. On the smaller models the jack can be placed with the handle and on the 12 and 20 ton models a handle is cast integral with the housing.

Every Silver King Hydraulic Jack is guaranteed to be free from mechanical defects



and to operate with ease under all weather conditions and temperatures ranging from that of the hottest climates to 25° below zero.

The coupon, when filled out and mailed, will bring complete information on the Silver King Hydraulic Jack, including instructions for servicing and recommended flat rate charges for the different operations. The name of your preferred jobber on the margin will be appreciated.



MORE JACK FOR YOUR "JACK"

THE SILVER KING HYDRAULIC JACK CO.

5604 Cedar Ave.

Cleveland, Ohio

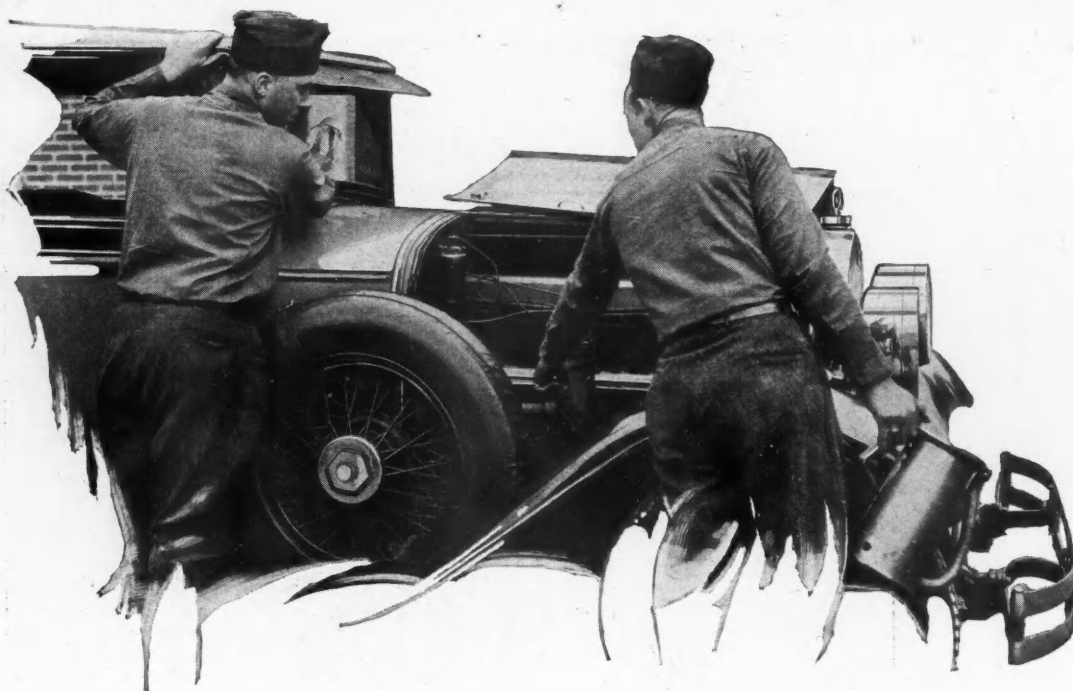
The Silver King Hydraulic Jack Company
5604 Cedar Ave., Cleveland, Ohio

Please send me complete information on your
Silver King Hydraulic Jacks.

Company _____

Address _____

Signed by _____



"Correct lubrication is simple as A B C with that device"

EVERY MOTORIST knows that correct lubrication is the "life blood" of his motor. But he has never been able to actually know whether the oil in the crankcase was positively doing its duty until *VISCO-METER* put the answer right before his eyes, accurately and continuously every second of the motor's operation.

Measures Lubricating Value

VISCO-METER measures the viscosity (body) of the oil in the crankcase, while the motor is running and through its gauge on the instrument panel gives a continuous report of the lubricating value to the driver. Heat, cold, dilution and all other factors that affect an oil's ability to lubricate

are constantly checked and indicated.

VISCO-METER protects the motor against faulty lubrication.

Wasteful oil changes costly repairs, excessive wear, sluggish motors, gasoline waste, guesswork and doubt, are no longer necessary.

VISCO-METER does not interfere with the lubricating system—but completes its job.

VISCO-METER has proved its worth to individuals and fleet owners. Car and Truck operators have been quick to appreciate its value and economy.

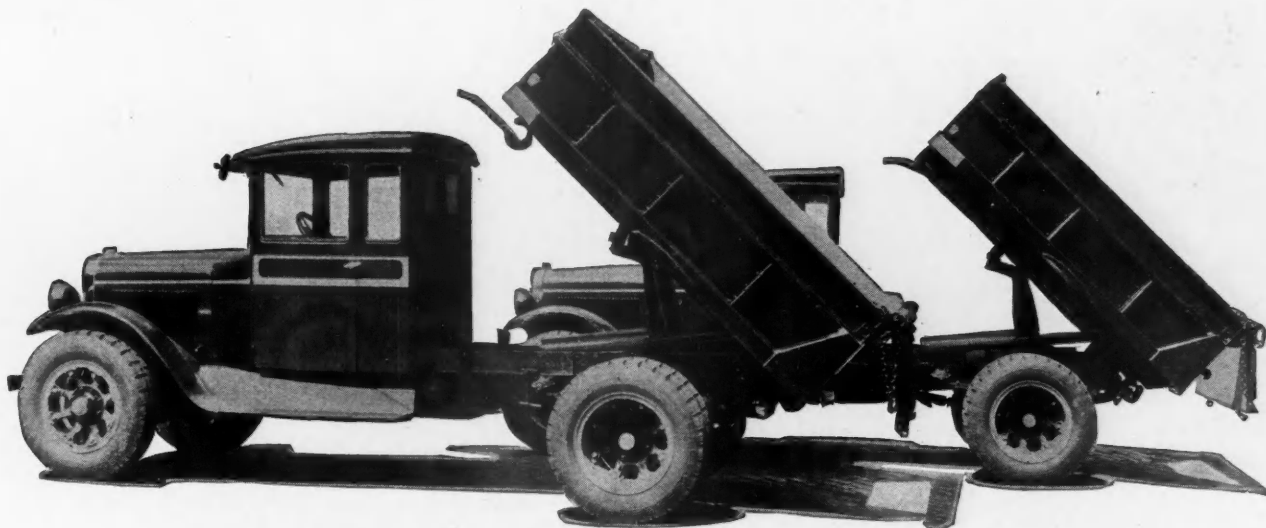
VISCO-METER is ruggedly built, needs no servicing, reasonably priced, easily installed.

Dealers have found the *VISCO-METER* to be mighty profitable and practically a "self seller". We would like to tell you all about it in detail. Mail the coupon today. *Visco-Meter Corporation*, 316 Grote Street, Buffalo, New York.

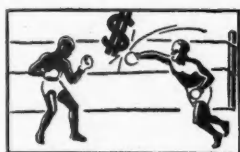


VISCO-METER CORP., 316 Grote Street, Buffalo, N. Y.
Gentlemen:
I'd like complete information on the *VISCO-METER*.
Name _____
Address _____
State _____

The **VISCO-METER**
Takes the Guesswork out of Motor Lubrication

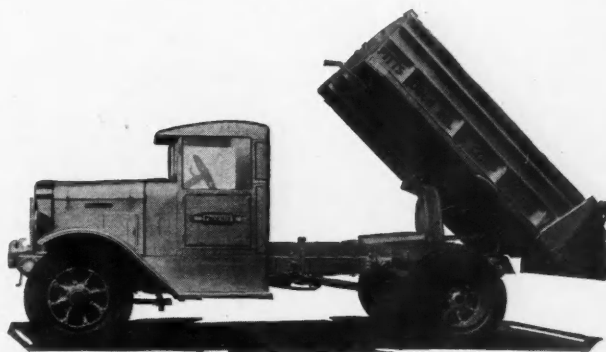


Two Dodge 3-ton trucks equipped with Model 6UB St. Paul Underbody Hydraulic Hoists for Centerville Borough, Pa., and mounted by The Schnabel Co. of Pittsburgh, Pa.



When You're Fightin' for Dollars with Dump Trucks

It's a fight to the finish—of the job. Old Man "Time" is the hardboiled referee and the seconds are mighty important. With St. Paul Hoist equipped trucks, you've got the job licked before you start. When the gong strikes, your St. Paul Hoists are ready for a 24-hour "go" of as many rounds as the trucks can make. St. Pauls are economical as well as tireless fighters. So your gate receipts will always show a profit, and—as Amos says to Andy, "Um! Um! Ain't dat sumpin'?"



Model W-3 International Truck 160" W/B and equipped with Model 7UB St. Paul Underbody Hydraulic Hoist for Pittsburgh Rolls Corporation.

"Ask the Dump Truck Driver on the Job"

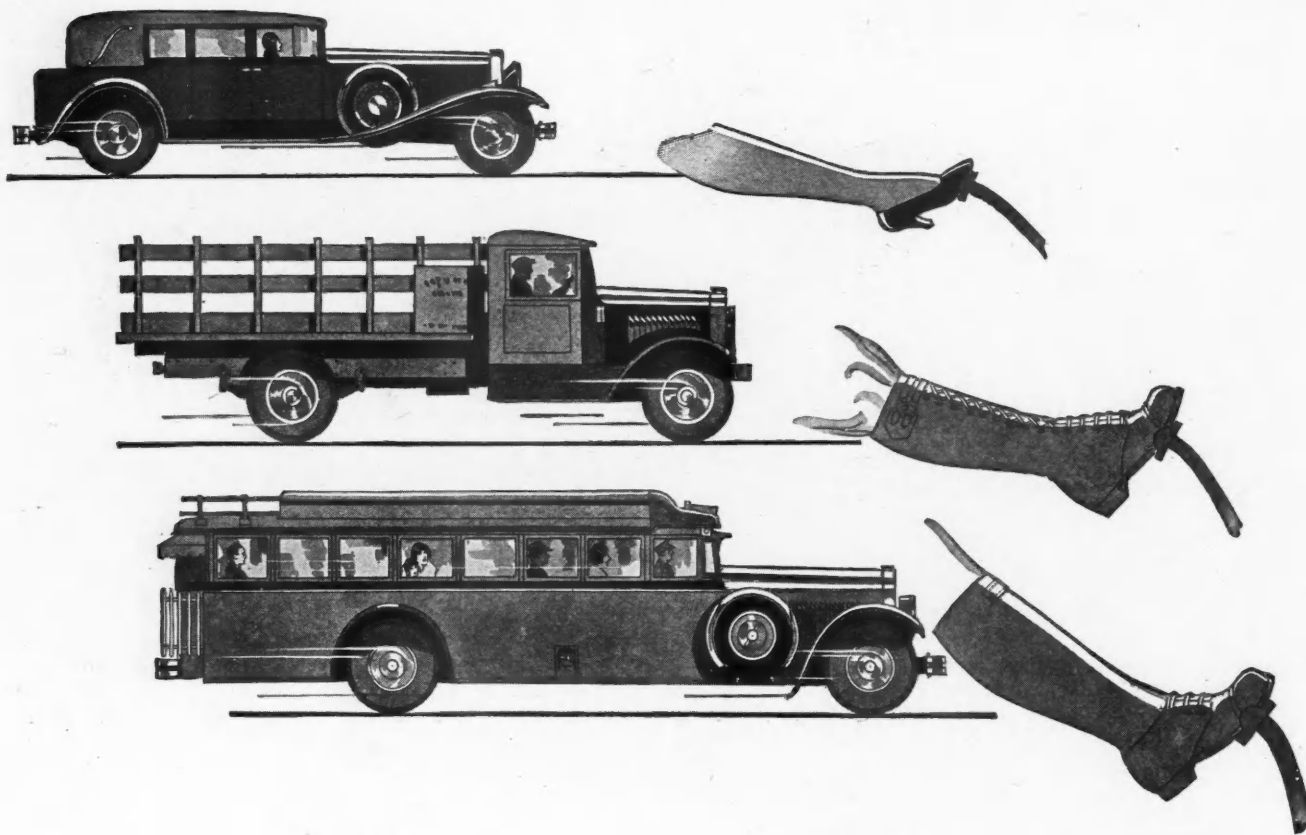
—St. Paul—

**VERTICAL AND UNDERBODY
HYDRAULIC HOISTS**

St. Paul Hydraulic Hoist Company

Factories at St. Paul, Minn.

A St. Paul Hoist Distributor and Service Station is near you. Write for name and address



More Power to your right foot

These are high-powered, high-speed days—men and merchandise in a hurry; distribution calling for faster and faster deliveries.

Hand in hand with higher speed—necessary to it, governing it—is high-powered braking.

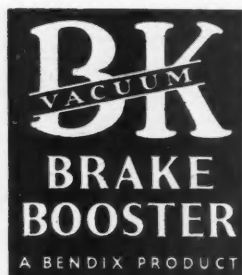
The ideally simple and efficient power brake system is the B-K Vacuum Brake Booster; that compact device which uses the vacuum of the intake manifold as braking power; adding “more power to the right foot.”

More and more fleet operators are finding B-K effectiveness recorded instantly in lower costs—bigger profits; through safe control, faster schedules, and conserving of driver efficiency.

And leading makes of trucks and buses have B-K equipment as standard. B-K Vacuum Brake Boosters may be installed on all makes of cars, buses, trucks, tractors and trailers; without changing the original brakes.

Your territory may be open for the B-K distributing franchise. It's a profit-winner. Better find out about it.

Refer to Chilton Multi-Guide for complete list of our distributors.



BRAGG-KLIESRATH CORPORATION
Queens Blvd. & Harold Ave. • Long Island City, N.Y.
(DIVISION OF BENDIX AVIATION CORPORATION)



T urn Red Ink into Black

Even a fraction of a cent a mile saved in haulage costs will often eradicate red ink in the final profit statement of a business. Very often the REO saves as much as one or two, or even three cents a mile.

REO SPEED WAGONS and

TRUCKS are *fast-moving*, and saving on repairs, tires and gasoline. REOS are equipped with bodies that fit the need, that save on loading time and truly advertise the owner's business. With so many savings possible, *call REO in.*

REO MOTOR CAR COMPANY, LANSING, MICH.

SPEED WAGONS

REO

AND TRUCKS

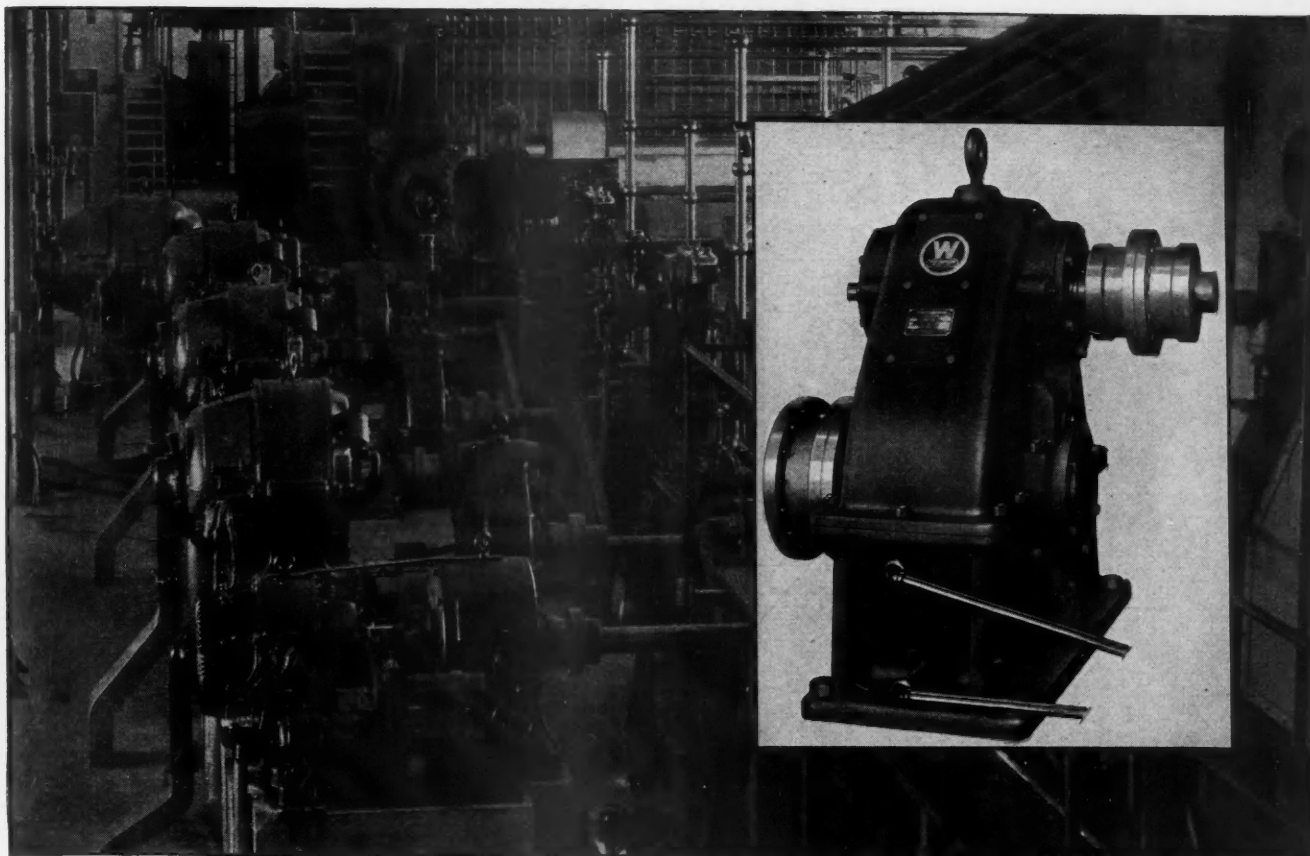
"ON THE JOB"



7 Days a Week

WHEREVER difficult schedules must be met, you will find that Willards soon demonstrate their ability to stand up ruggedly in *any* kind of service. Fleet operators everywhere have had ample evidence that these batteries will stay "on the job" dependably—even under the hardest usage.

Willard STORAGE BATTERIES
CLEVELAND • OHIO
LOS ANGELES • CALIF. • TORONTO • ONT.



These Timken Bearings Have Run 70 Times the Life of the Average Automobile

The pinion bearings in the 6 Westinghouse-Nuttall gear reduction units at the Washington Pulp and Paper Company have each rolled up the enormous total of over 2,338,000,000 revolutions, and a recent check-up shows that they are good for many millions more.

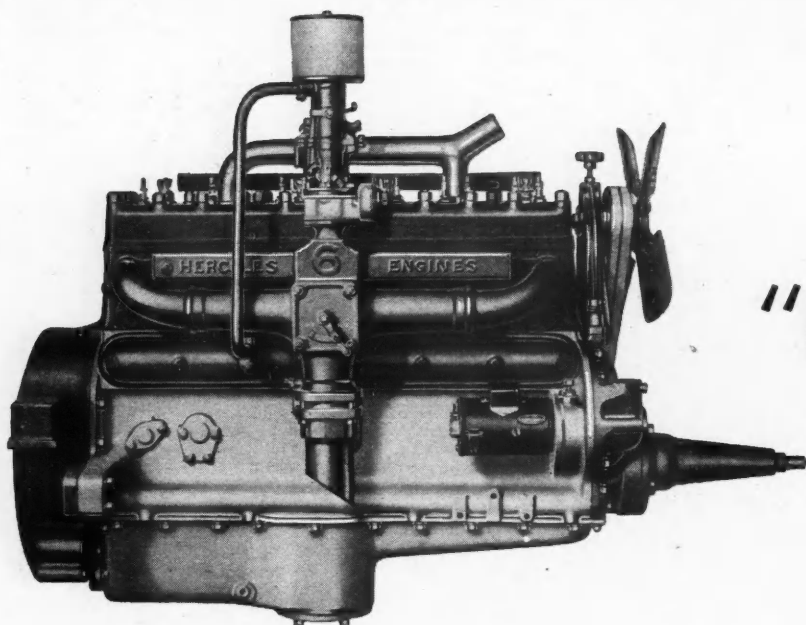
Loaded 100% of their Timken catalogue rating, they have averaged $6\frac{1}{4}$ days per week, 24 hours a day since they were installed in April, 1923.

The total distance traveled by each of these bearings is the equivalent of driving an automobile more than 3,500,000 miles, whereas the average automobile travels but 50,000 miles during its entire life.

A worthy tribute to Timken stamina! Don't you want this same unequalled endurance in the trucks and buses you build, operate or sell? The Timken Roller Bearing Company, Canton, Ohio.

TIMKEN *Tapered Roller* **BEARINGS**

HERCULES ENGINES



THE "HX" SERIES OF SIXES

HERCULES "HX" Series Engines have been developed with a particular view to meeting modern requirements for heavy-duty, six-cylinder power in the higher horsepower ranges.

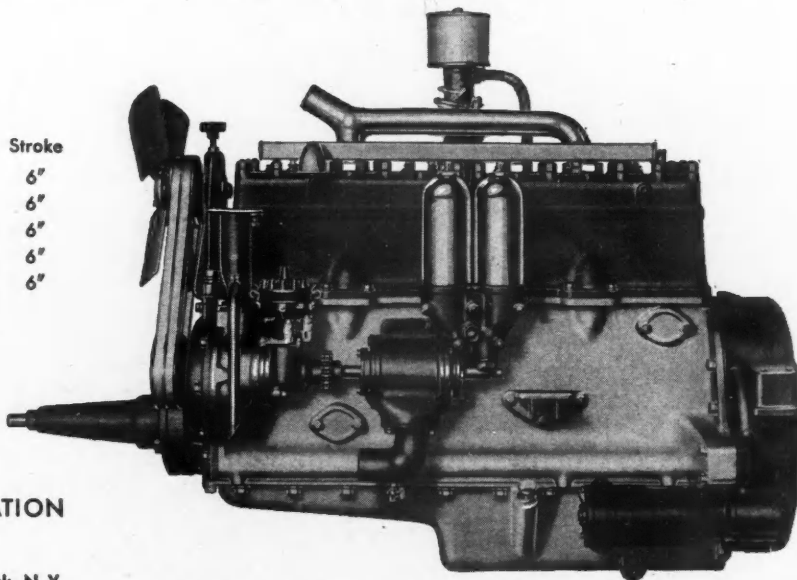
Like all Hercules Engines they are simple, rugged, advanced in engineering. Special attention has been given to effective cooling and lubrication.

Full provision has been made for all possible accessories.

The reputation for all-around superiority which Hercules Engines have earned throughout the heavy-duty power field is still further enhanced by the "HX" Series Sixes. Complete information and details will gladly be furnished on request.

SPECIFICATIONS

Model	Cylinders	Bore	Stroke
HXA	6	4-3/4"	6"
HXB	6	5"	6"
HXC	6	5-1/4"	6"
HXD	6	5-1/2"	6"
HXE	6	5-3/4"	6"

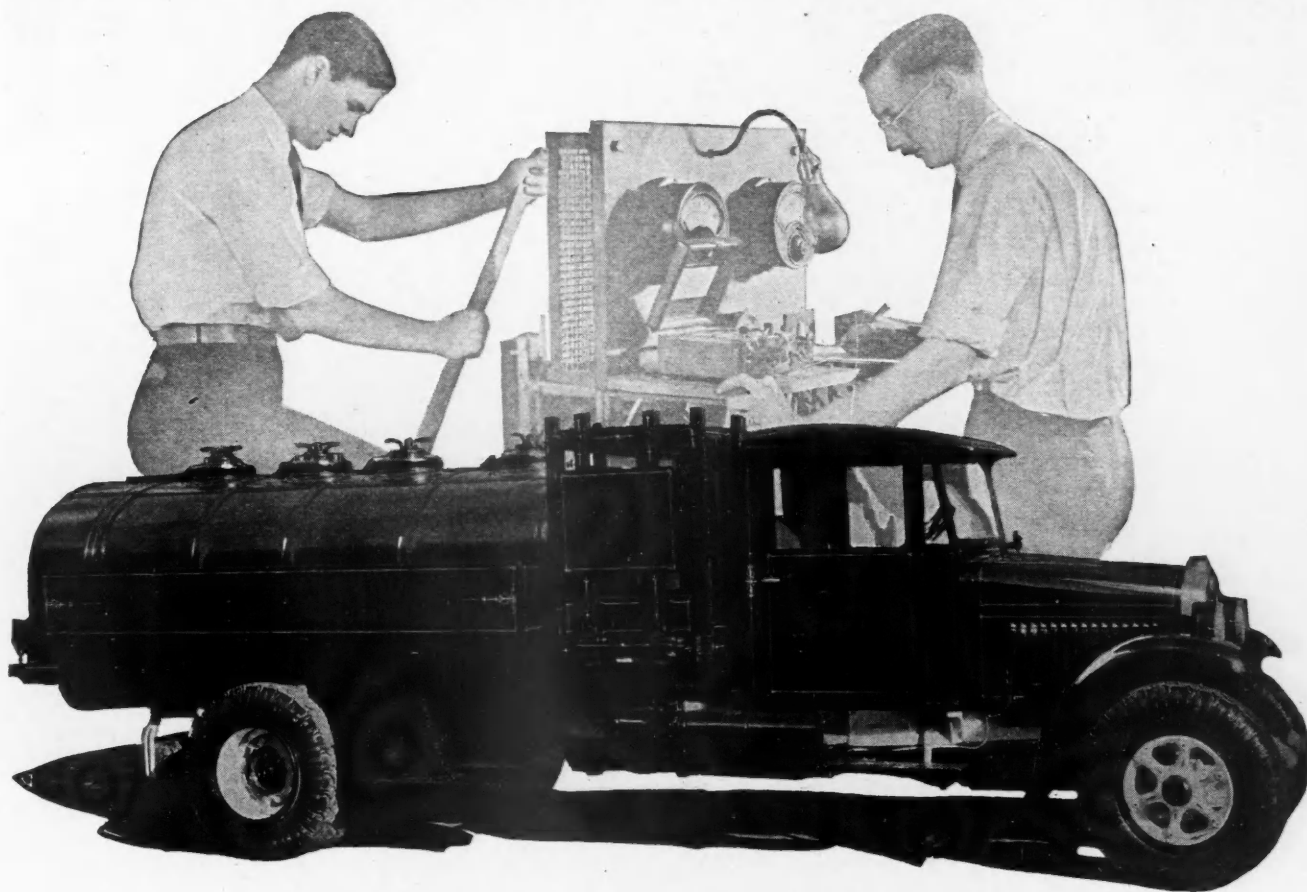


HERCULES MOTORS CORPORATION
Canton, Ohio, U. S. A.

New York Office: Chanin Building, New York, N.Y.
Mid-Continent Office: Mayo Building, Tulsa, Okla.
West Coast Office: Russ Building, San Francisco, Cal.

[See the Hercules "HX" Series Sixes at the Automobile Shows and at the St. Louis Road Show]

THIS • THERMOID • FACTORY • TEST



ASSURES THIS TRUCK

SAFE *and* SANE BRAKES

When you standardize on Thermoid you get virtually custom built linings for your fleet. *The new Thermoid F-M-L brake linings!* Thermoid F-M-L is produced in different frictional qualities to match the different requirements of different trucks.

There is a type of Thermoid Brake Lining for every make of truck and brake. This cuts upkeep and assures safety . . . And Thermoid engineers have carried the matter a step farther. They have recorded the right lining for each installation and

made a chart-record available to all service men. Guesswork is eliminated. When you change to Thermoid your drivers will "feel" the additional security. But just as important—the definite dollar-and-cents saving will show on your upkeep sheets.

A copy of the Thermoid Recommendation Chart is yours for the asking

THERMOID RUBBER COMPANY
Factories and Main Offices, TRENTON, N. J.
Brake Lining Transmission Lining Radiator Hose Clutch Rings
Universal Joint Discs Mechanical Rubber Goods

F-M-L

FLEXIBLE MOULDED LINING

Thermoid
"HYDRAULIC COMPRESSED" — "F-M-L" — "CAL" — "INTERWOVEN"
BRAKE LININGS
FOR SHORT STOPS AND LONG SERVICE

Drive
as you
would have
the other
fellow drive

THE GOLDEN
RULE OF THE ROAD
DRIVE - SAFELY -
WITH - SAFE - BRAKES

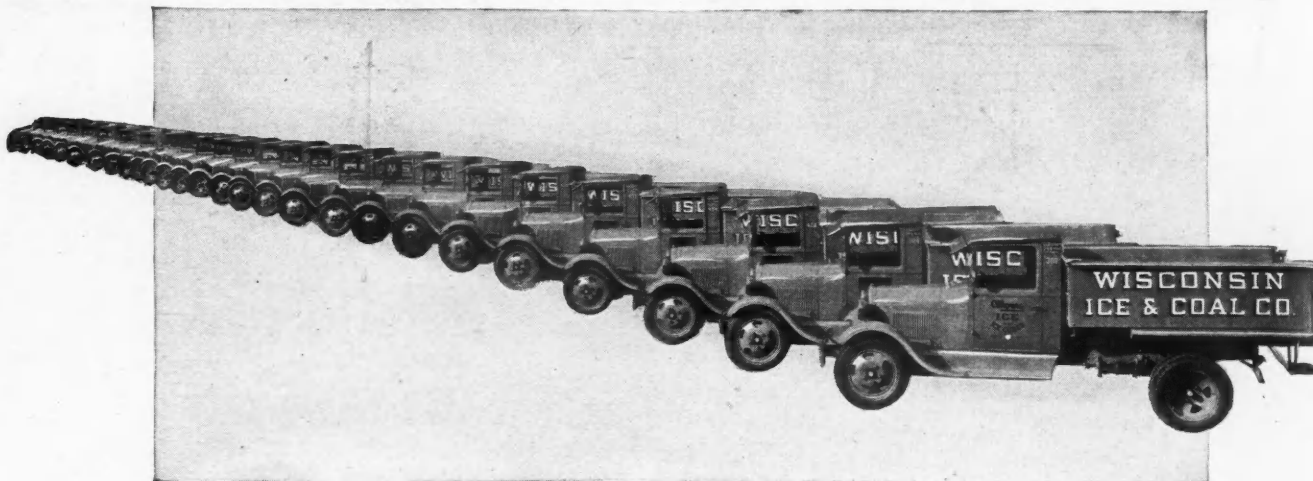
MAIL THIS COUPON

THERMOID
RUBBER CO.
Trenton, N. J.

Please send me
copy of Thermoid
Recommendation
Chart.

Name.....

Address.....



17,550 lbs. More Pay-load One Trip a Day Free / / / Less Gas / Oil / Tires /

Replacing heavy, obsolete truck bodies with those made from the strong alloys of Alcoa Aluminum is profitable business to body builders—pays high returns to operators.

On its fleet of 27 delivery trucks, The Wisconsin Ice & Coal Company saved 650 lbs. of dead-weight per truck by using bodies of Alcoa Aluminum.

This meant that 650 lbs. more ice could be hauled every trip by each truck—a total of 17,550 lbs. for the fleet of 27. Deliveries requiring three round trips daily were made in two. In 6 months' time these savings pay for the additional cost of the Alcoa Aluminum strong alloy bodies.


These tremendous weight reductions

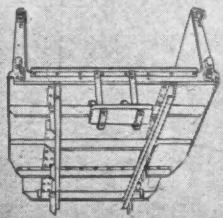
are possible because the strong alloys of Alcoa Aluminum weigh only $\frac{1}{3}$ as much as other structural metals, yet they have a minimum tensile strength of 55,000 lbs. per square inch.

Standard structural shapes and sheets of strong alloys of Alcoa Aluminum from which truck bodies are made, are carried in stock. Plates, rivets, bolts and screws are also available.

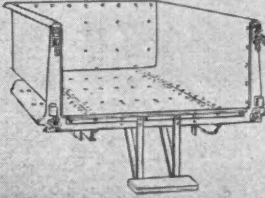
Write for the booklet, "Alcoa Aluminum for Truck Bodies." It includes engineering drawings and data for building various types of bodies, and case histories of many Alcoa Aluminum bodies now in use. Address ALUMINUM COMPANY of AMERICA; 2439 Oliver Building, PITTSBURGH, PENNSYLVANIA.

ALCOA ALUMINUM






(at left) Details showing typical body construction from under side. (at right) Top view of body showing punching and formation of standard sheets.



STRONG TO BEAR BURDENS
— LIGHT TO MOVE





White Heavy Duty Six-Wheel Truck

Make More Money in 1931 With Dependable White Trucks

RUGGED, powerful and dependable, the new heavy duty and medium heavy duty six-cylinder White Trucks enable operators to maintain faster schedules and reduce transportation costs.

Experienced, far-sighted operators do not gamble in purchasing truck equipment. They know that cost per mile is the most important factor. They know that the initial investment is a small factor in computing per-mile cost of operation—unimportant when compared to maintenance cost and length of life.

The successful truck operator knows his costs. His margin of profit depends entirely upon keeping his cost per mile at the lowest possible figure.

Lower your transportation costs and increase your profits in 1931 by using dependable and economical White Truck equipment.

THE WHITE COMPANY, Cleveland

A CHEAP TRUCK TO BUY IS SELDOM A CHEAP TRUCK TO OWN

WHITE TRUCKS

FOURS AND SIXES

We got the job . . .

INDIAN REFINING COMPANY
INCORPORATED
Refiners and Marketers of
PETROLEUM PRODUCTS
GENERAL OFFICES
Lawrenceville, Illinois

Budd Wheel Company,
Detroit, Michigan.

Gentlemen:

When we contemplated changing several of our fleet from solid to pneumatic tires, we went into the matter very thoroughly. After due investigation, we decided on Budd-Michelin wheel equipment. In coming to this conclusion, appearance -- in keeping with the high quality of our Waxfree Havoline -- durability, and increased tire mileage were all taken into consideration. So Budd-Michelin wheels got the job.

Yours very truly,

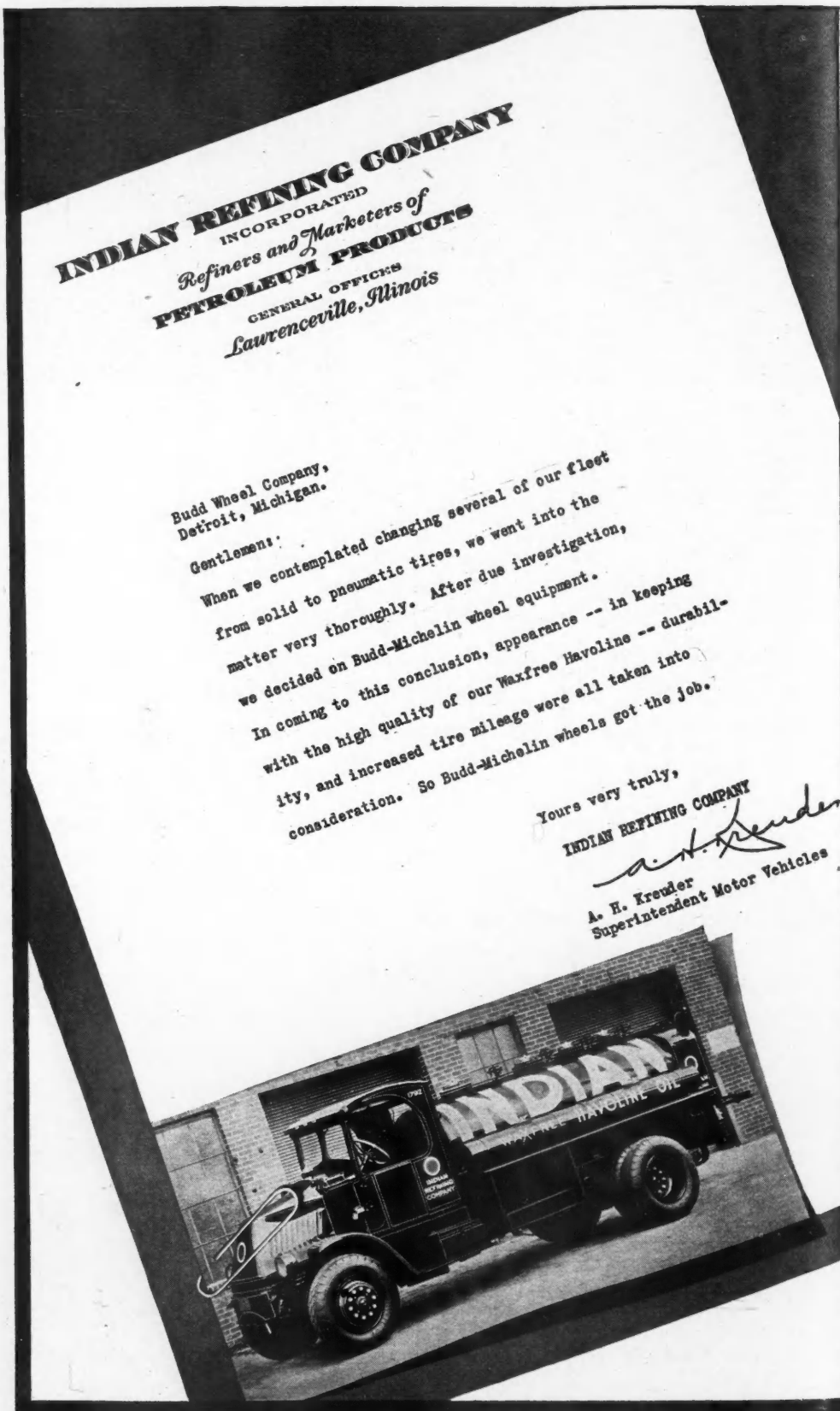
INDIAN REFINING COMPANY

A. H. Krewder
A. H. Krewder

Superintendent Motor Vehicles

**BUDD
DUALS**

BUDD WHEEL COMPANY
DETROIT



Three Times *the* Mileage

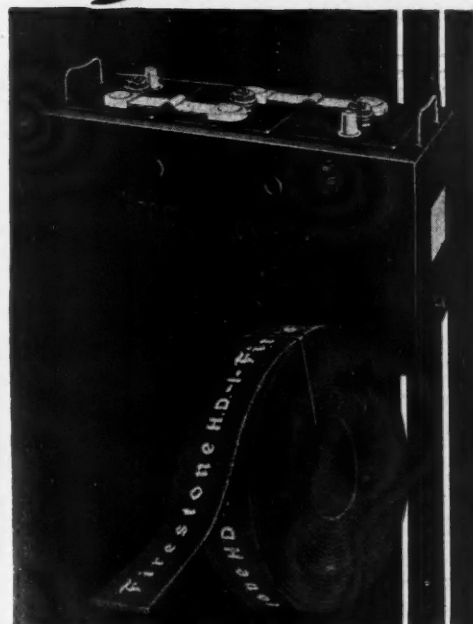
with ROAD DELAYS

PRACTICALLY ELIMINATED



THREE times as many buses as they operated in 1926! Three times the mileage, amounting to more than three million miles. And yet since Firestone Gum-Dipped Truck and Bus Tires were adopted by the Washington Railway and Electric Company, four years ago, road delays have decreased from 254 a year to a mere 27—*having been practically eliminated*. During this time the bus miles operated per tire failure have been increased from 7300 to 120,542—an increase of over 16 times the average of 1926.

Firestone



WHAT truly amazing evidence of the rapid strides that Firestone has been making in the improvement of Truck and Bus Tires! What eloquent testimony to the results which are being secured by Firestone's careful supervision of the use and care of its products—not for just a single year or two—but continuously over a long enough period of years to make a real test. And all this is but one of the many similar cases where owners of the country's largest fleets are depending on the Firestone Organization for more economical, less interrupted fleet operation. With Firestone Tires, Tubes, Batteries, Brake Lining and Rim equipment, you can profit by the broad experience of the Firestone Dealer, in the proper adaptation and care of your Truck or Bus equipment.

Specify Firestone Gum-Dipped Tires and Firestone Rims when purchasing new equipment.

TIRES - RIMS - BATTERIES - BRAKE LINING

Fisher-Standard

"Built of the Best and Stand the Test"

A COMPLETE
LINE OF
MOTOR
TRUCKS
BY A
PIONEER
BUILDER



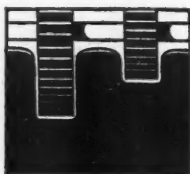
NEW
PROFITABLE
FLOOR PLAN
FOR
DEALERS

CAPACITIES:
3/4 TO 10 TONS

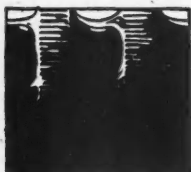
SPECIAL HIGHWAY UNITS

STANDARD MOTOR TRUCK COMPANY
DETROIT, MICHIGAN, U. S. A.

Ordinary grease
'channels'



Dixon's clings
to the gears

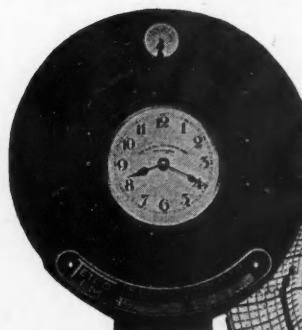


**Winter's
Here!**

Change to Dixon's—the
Non-Channelling, 100% Lubricant

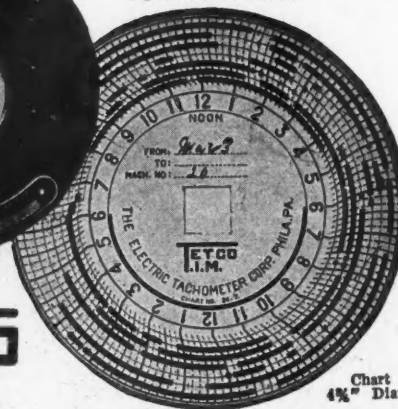
Stiff gear shifting is a sure sign you are using the wrong lubricant in transmission and differential. Change to Dixon's 677. It won't freeze. Gear shifting is easy on the coldest day. Instead of channeling thru frozen grease the gears are lubricated with Dixon's double film of graphite and grease. Truck dealers should investigate our dealer plan. Write for Bulletin 122-G. Joseph Dixon Crucible Co., Jersey City, N. J.

Dixon's 677 Graphited Grease



Recorder
5 1/2 inches.

**TETCO
I.I.M.**



This chart is an actual reproduction of a trip made by a moving van from Philadelphia to Chicago and return. Heavy line indicates operating time. Light line idle time.

Chart
4 1/2" Diam.

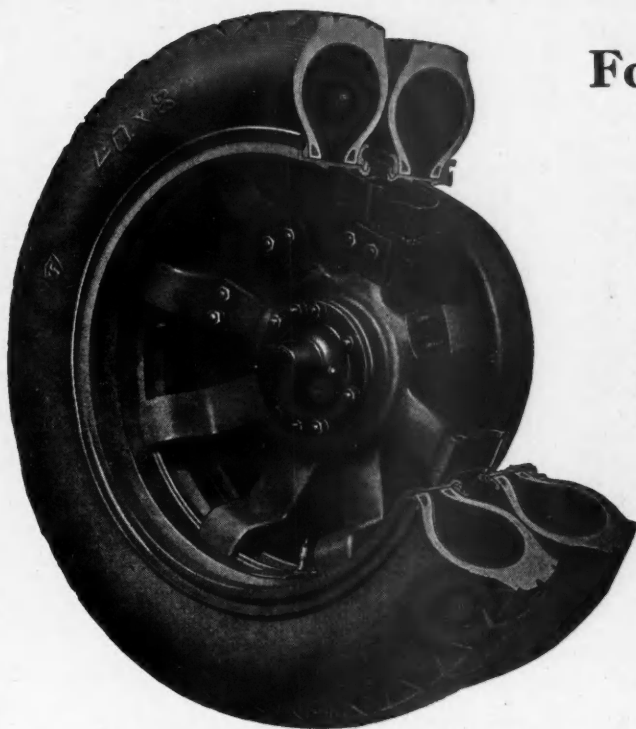
Let's Find the
BLACK SHEEP!

When a truck isn't hitting on all cylinders you get spotty performance. When a unit is falling down on the job profit performance is spotty. Let's eliminate the BLACK SHEEP. Give the producers the credit they should have. TETCO T.I.M. will supply you truthfully and accurately with all the information you need to know on the activity of each of your trucks.

TETCO T.I.M. is a most efficient, useful and economical time recorder. This Seven-Day Recorder with a year's supply of charts—\$40.00. Write for quantity discount. Distributors write for proposition.

The Electric Tachometer Corporation
Broad and Spring Garden Sts.
Philadelphia Penna.

HOOPES WHEELS



For Single and Dual Pneumatic Tires

Hoopes-Parker Wheels—A spider type of wheel with hub cast integral for use on trucks and buses.

Both brakes and tires of the dual wheels are cooled owing to the free circulation of air fanned by specially constructed spokes.

Tires run perfectly true. Rims carrying both inside and outside tires can be easily and quickly mounted or removed from the wheel.

Light in weight—The cost is surprisingly low.

Manufacturers also of Hoopes Wood Spoke Metal Felloe Wheels for Use with Solid Tires

1867

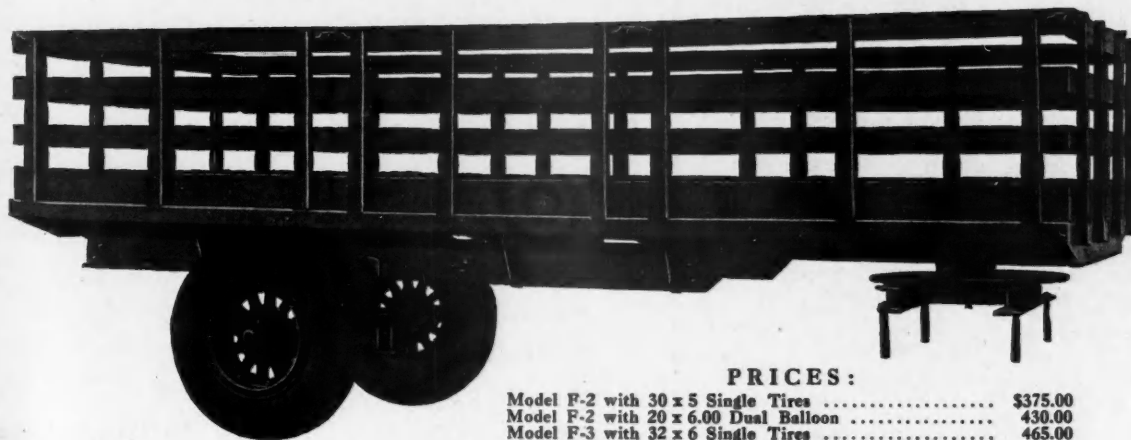
Hoopes, Bro. & Darlington, Inc.

WEST CHESTER, PA.

1931

New Universal Trailer

The New Universal Trailer is the latest product of Kingham in keeping with our policy of one pace ahead in design, capacity and price on trailers for all vocations. The New Universal Trailer has a very desirable feature in its drop frame, making loading height approximately 41", depending on the tire equipment used. Investigate this and similar Kingham leaders. Write for full details.



Note the exceptionally low prices on the New Universal. Model F-2 is 3-ton capacity. Model F-3 is 4½-ton. Model F-4 is 6-ton. Can also be furnished in ten ton.

PRICES:

Model F-2 with 30 x 5 Single Tires	\$375.00
Model F-2 with 20 x 6.00 Dual Balloon	430.00
Model F-3 with 32 x 6 Single Tires	465.00
Model F-3 with 32 x 6 Truck Type Dual Tires	540.00
Model F-4 with 34 x 7 Single Tires	620.00
Model F-4 with 32 x 6 H.D. Dual Tires	715.00
<i>(Prices include body and fifth wheel)</i>	

KINGHAM TRAILER COMPANY, Inc.
LOUISVILLE, KENTUCKY

Sturdy Steel Ousts Wood



Patented
Patents Pending

"HALLOWELL" STEEL WORK BENCH

Yes, it's getting to be steel more and more—in all walks of life.

It's because wood splinters, cracks, warps, gets wobbly, absorbs oil, is hard to keep decently clean and burns. Steel won't do any of these things.

The Drawer is Extra— Do You Need One?

And the "HALLOWELL" Steel Work Bench is a fine example of modern steel construction—strong, rigid, and wobble-proof—wears as only steel can wear.

Then it's easy to clean that broad one-piece steel top without a crack and without a splinter, and so hard and close that oil never soaks in.

And we carry 1368 different sizes and combinations of "HALLOWELL" Bench Equipment in stock for immediate shipment.

WE MANUFACTURE:

"HALLOWELL" STEEL WORK-BENCHES
"HALLOWELL" STEEL WORK-TABLE
"HALLOWELL" STEEL WORK-BENCHES,
SEMI-PORTABLE
"HALLOWELL" STEEL-WOOD WORK-BENCHES
"HALLOWELL" STEEL-WOOD WORK TABLES
"HALLOWELL" STEEL BENCH-DRAWERS
"HALLOWELL" STEEL CHAIRS
"HALLOWELL" STEEL STOOLS
"HALLOWELL" STEEL SHOP-FURNITURE
"HALLOWELL" STEEL FLOOR-TRUCKS

"HALLOWELL" Service Station Equipment of Steel is featured in the Manuals of Oakland-Pontiac, Hudson-Essex, Buick, Chevrolet, Graham-Paige, Willys-Overland and Studebaker.

STANDARD PRESSED STEEL CO.

BRANCHES
BOSTON
CHICAGO
DETROIT

JENKINTOWN, PENNA.
BOX 518

BRANCHES
NEW YORK
SAN FRANCISCO
ST. LOUIS



HANDY GOVERNORS

"Handy Governors have proved themselves a necessity on our trucks, we are glad to testify. This device has reduced the cost of operation and retained the power. It has also given us control of our drivers, in so far as speed is concerned."

EMPIRE LAUNDRIES, INC.
by E. B. Francis

A NECESSITY! That's what Empire Laundries of Hartford call their Handy Governor equipment. And with good reason! For, in this day and age, any device that cuts laundry delivery costs IS a necessity—nothing less.

It's all very simple. Just consider!

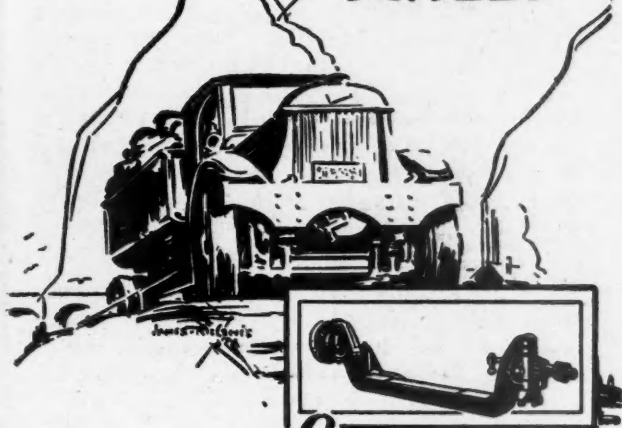
With the laundry fleet, half the repair work and almost all major accidents, are due to overspeeding. And Handy Governor makes overspeeding impossible. So your delivery costs drop, and your profits grow, from the very moment your Handys go on!

The whole story? Ask our nearby distributor or write direct to Handy, the world's largest builder of governors!

HANDY GOVERNOR CORPORATION
3929 W. Fort St. Detroit, Mich.

SHULER

FRONT AXLES



for **TRUCKS**

Tractors and Trailers

PROMISES of SHIPMENT

A promise to ship on a certain date is taken seriously by us.

Only conditions beyond our control can operate to prevent shipment within the time promised.

**FRONT AXLES
O N L Y**

with or without brakes



SHULER AXLE CO.
INCORPORATED
LOUISVILLE KENTUCKY

The Commercial Car Journal

A Message

from

B. A. Gramm



Dean of the

Motor Truck

Industry

MR. B. A. GRAMM
President and Treasurer
Gramm Motors, Inc.,
Delphos, Ohio

SAFETY

Comfort, both mental and physical, is dependent upon SAFETY. One of the greatest SAFETY advantages of Gramm trucks is **LOW CENTER OF GRAVITY** which eliminates sidesway quite common in most commercial vehicles especially under adverse road conditions so prevalent in winter driving.

Another great SAFETY feature is the **POWER UNDER THE HOOD**. All Gramm trucks are amply powered with plenty of reserve when needed. This is greatly appreciated by Gramm drivers in present day congested traffic.

SAFETY should outweigh all other considerations in the selection of your truck. Gramm trucks are structurally different from all others, based on thirty years engineering experience in building highway transportation.

**DON'T EXPERIMENT—
BUY A GRAMM**

Each chassis admirably sustains the Gramm slogan:

"POWERFUL AND FAST—BUILT TO LAST!"

B. A. Gramm

GRAMM MOTORS, Inc.

*Builders of fine Motor Trucks, Vans, Busses
Specialized Chassis for Fire Apparatus*

DELPHOS, OHIO, U. S. A.

EXPORT

Willys-Export
Corporation

Toledo, Ohio, U.S.A.



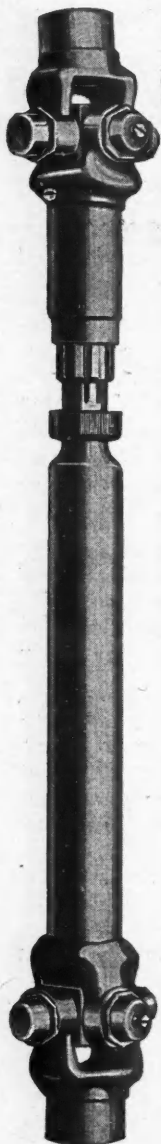
EXPORT

Willys-Overland
Crossley, Ltd.

Stockport, England

January, 1931

Important Links



— — — — —
Blood Joints are the important links in the power transmission of some of the most carefully designed trucks built because they insure the utmost in durable, trouble-proof performance.

Although invented at a time when the automotive industry was in its infancy, the original principles of design have proven so satisfactory that in twenty-six years such changes as have been made have been confined to the minor details and refinements suggested by experience. We feel justly proud of this record which indicates a design of outstanding merit.

— — — — —

— — — — —
Years of wear will necessitate the replacement of but a few simple, inexpensive parts which Blood design makes it quick and easy to install.

— — — — —

**BLOOD-BROTHERS
MACHINE COMPANY
ALLEGAN, MICHIGAN**

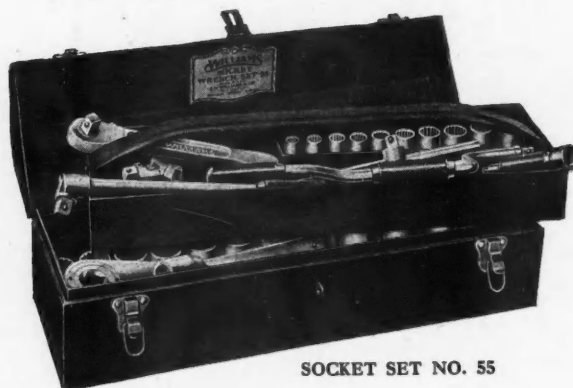
The Swiftest Service Helpers You Ever Had

Wrench hunting is always "out of season"—when these Williams Socket Sets are on the job. It only takes a minute to build up exactly the wrench that makes easy work of the job at hand. No searching for proper tools—no time wasted on adjustment with wrenches not suited to the work. These Socket "Superrench" Sets are the swiftest service assistants you ever had.

In Williams Garage Set No. 55 you have a socket outfit that covers practically the whole range of socket work, from $\frac{1}{4}$ " to $1\frac{5}{8}$ ". Fourteen different handles and parts that you can assemble in all sorts of helpful combinations.

For Heavy Duty service alone, the sizes $\frac{7}{8}$ " to $1\frac{5}{8}$ " are made up in a separate set—No. 50—with their own special handles and parts.

Simplify and speed up your service—with Williams Socket "Superrench" Sets. There's an interesting catalog for the asking. Ask!



SOCKET SET NO. 55

WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"SUPERRENCH"
SOCKET WRENCHES

J. H. WILLIAMS & CO.
"The Wrench People"

75 Spring Street—New York

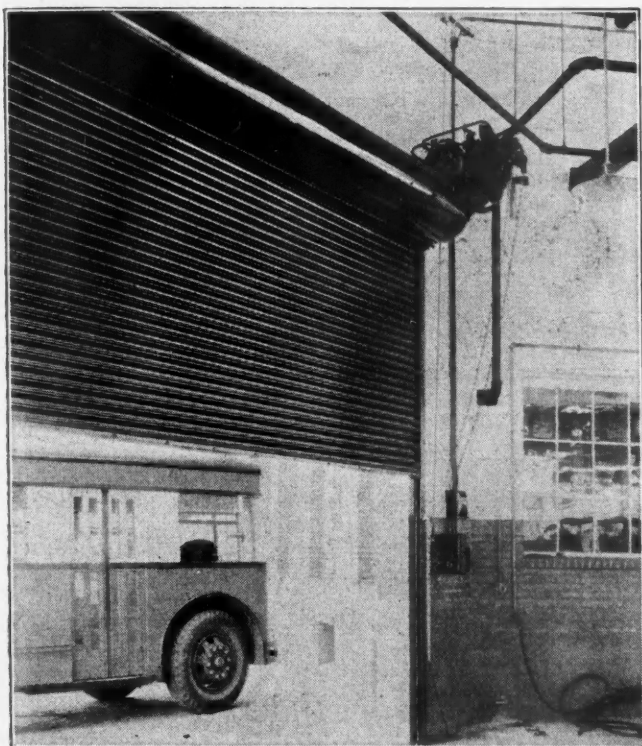
Western Warehouse and
Sales Office
Chicago, Ill.

Works
Buffalo, N. Y.

Kinnear

ROLLING DOORS

used
 and endorsed
 by
 UNITED ELECTRIC
 RAILWAYS CO., Providence, R.I.



(Photo of Kinnear Door in their New Bus Terminal Garage)

WINNER 1st Award, Class A
Bus Transportation Maintenance
Award for 1930

So do all firms who will be satisfied with nothing short of the BEST . . . And there is a very good reason for this: Kinnear *originated* the interlocking steel rolling door . . . Kinnear's entire 12-acre plant devotes its entire energies to perfecting one product—ROLLING DOORS . . . and every Kinnear door is made and engineered "to order". Send for your free copy of the Kinnear catalog and details of Kinnear Engineering and Estimating Service available without cost or obligation.

THE KINNEAR MANUFACTURING CO.
 1270-1280 Field Avenue, Columbus, Ohio, U. S. A.

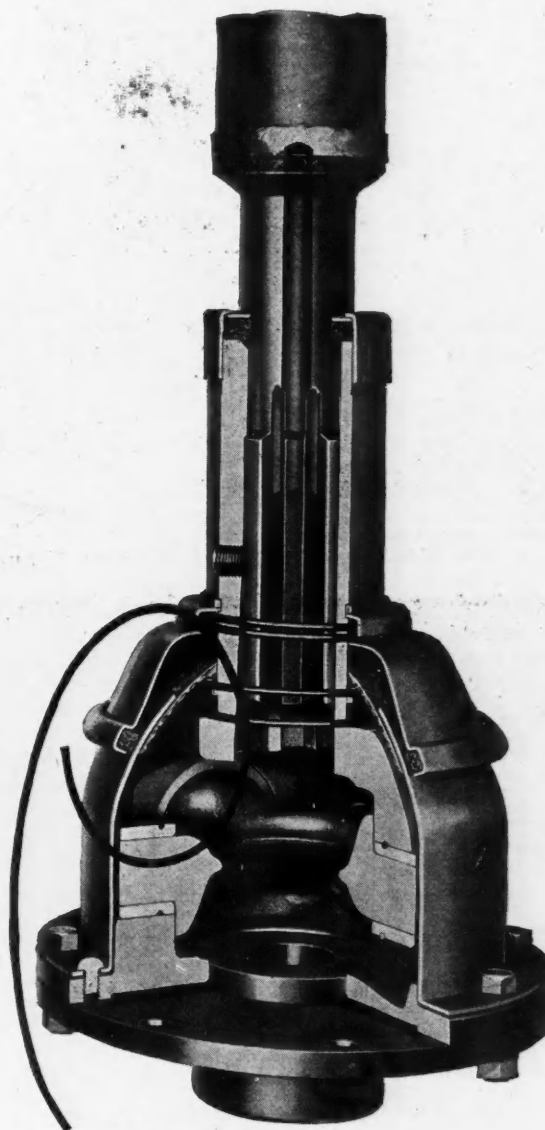
Boston Chicago Cincinnati Cleveland Detroit New Orleans
 New York Philadelphia Pittsburgh Kansas City Washington

The Commercial Car Journal

SPICER

SEALED

UNIVERSAL JOINTS



The new lubricant seal on the inside of the casing is just as positive and successful in retaining the lubricant as the outer casing has always been in excluding dirt and water.

ASSOCIATED **Spicer** COMPANIES

BROWN-LIFE
CLUTCHES and
TRANSMISSIONS

SALISBURY
FRONT and REAR
AXLES

SPICER
UNIVERSAL
JOINTS

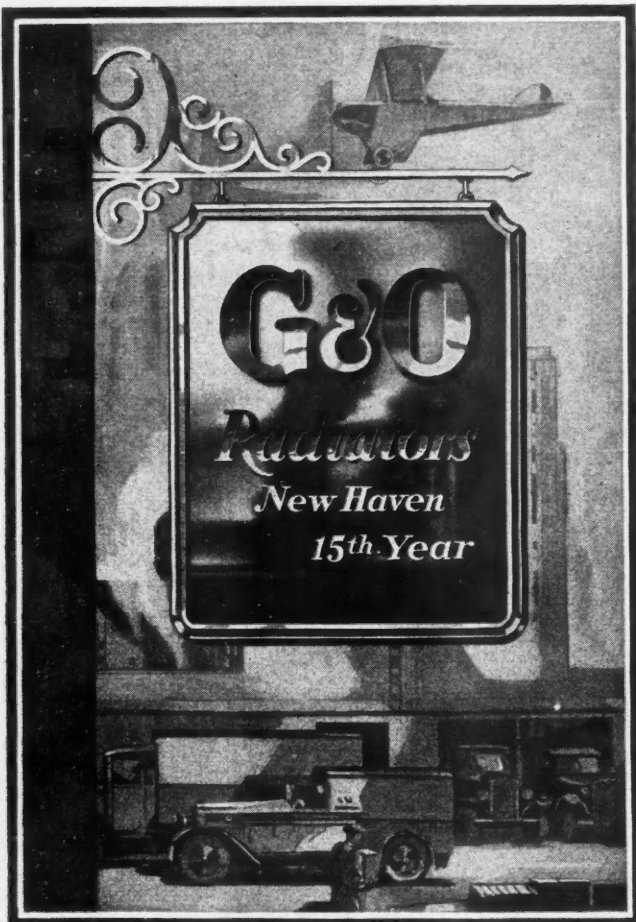
PARISH
FRAMES and
STAMPINGS

BROWN-LIFE GEAR CO.
TOLEDO OHIO

SPICER MFG. CORP.
TOLEDO OHIO

PARISH PRESSED STEEL CO.
READING PENNA.

January, 1931



The G & O Manufacturing Co., New Haven, Conn.

A
New Book
ON
Hauling Costs
SEND FOR
YOUR FREE COPY
OF
"Engineered
Transportation"

FRUEHAUF TRAILER CO.
10957 Harper Ave., Detroit, Mich.

A sure way to lower maintenance costs

CLEANING is an important part of maintenance. On every repair or overhaul job, grease and grime must be removed from parts before the work can proceed. Do your cleaning more efficiently and you are certain to lower maintenance costs.

Oakite cleaning removes dirt and muck quickly and thoroughly. Parts are speedily made ready for inspection and repair. Practically all hand scraping is eliminated. The time and effort saved by efficient Oakite materials help get work out on time and keep cleaning expenses at a minimum.

Use Oakite cleaning for safety, too, because Oakite materials cause no fire hazard, cannot burn or explode.

Our nearest Service Man will gladly give you more details. Write and he will call. No obligation.

Manufactured only by
OAKITE PRODUCTS, INC., 52F Thames St., NEW YORK, N. Y.

OAKITE

Industrial Cleaning Materials and Methods

MILEAGE
RECORDS

COST
CONTROL

Veeder-ROOT

HUB ODOMETERS

RECORD the mileage, indicate costs-per-mile of operating trucks under any and all conditions. Measure the performance of trucks, the efficiency of drivers. Point out economies in driving, routing, servicing. Give you control of operating-cost by a quick check on wasteful methods. Regular model for all standard trucks, \$20. (For "Model A" FORDS, complete with threaded hub for attaching, \$21.) Informative circulars for the asking. ♦ ♦ ♦

Veeder-ROOT INCORPORATED
HARTFORD, CONN.

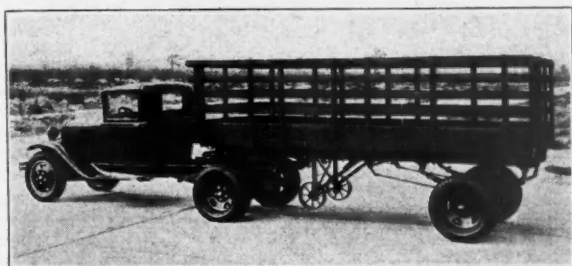
**SPECIALLY
DESIGNED FOR
HEAVY DUTY
SERVICE**



VICTOR
MADE IN U.S.A.
GASKETS

The World's
Standard Gasket

VICTOR MFG. & GASKET CO.
5750 Roosevelt Road .. Chicago
WORLD'S LARGEST GASKET MANUFACTURER



Why This New 3-5 Ton DISPATCH is Such a Fast Seller

Because it is the lightest and speediest 3-5 ton semi-trailer ever built in these pioneer trailer factories . . . because it makes the 1½ ton tractor as profitable as the larger power plants . . . because

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Fully Automatic and Manual Semi-Trailers, Four Wheel Trailers, Pole and Carryalls

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Representatives in all Principal Cities

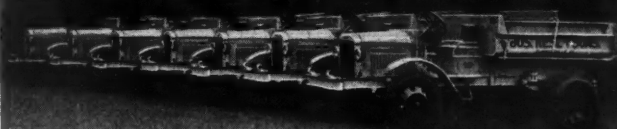
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BUFFALO, N. Y.

HUG



Additional fleet of Hug roadbuilders purchased by Joseph Keel & Son, Edwardsville, Ill.

Fleet Sales

During 1930 many new Hug fleets have been established. Numerous original fleet owners have added to their present equipment. These endorsements of Hug equipment by hundreds of leading contractors and roadbuilders reflect the constant trend to specialized roadbuilding transportation equipment.

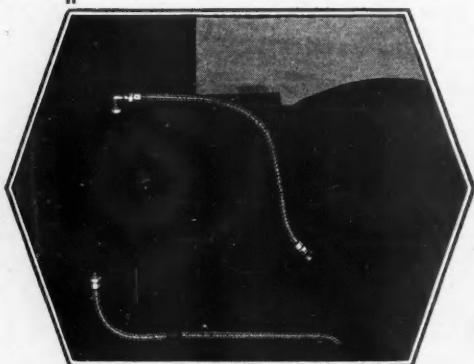
The Hug Roadbuilder is not an ordinary commercial truck. It is a specialized transportation unit with exclusive Hug features essential for roadbuilding performance.

You are invited to visit the Hug Exhibit at the 1931 Road Show, January 10-16, at St. Louis, Missouri.

The Hug Roadbuilder and Commercial Line offers unlimited sales possibilities for responsible distributor. Complete information furnished on request.



THE HUG CO., Highland, Illinois



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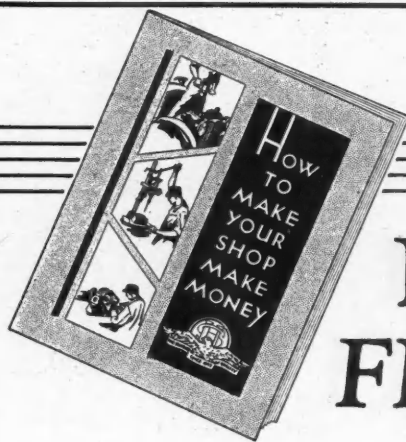


Truck and bus operation depends on a steady supply of fuel. If the fuel line breaks the motor stalls—passengers are delayed—shipments held up.

Titeflex All-Metal Flexible Tubing eliminates the possibility of fuel line breakage by being flexible enough to withstand the constant jarring vibrations. Comes with fittings attached—a complete service unit. Write for new catalog No. 109.

Titeflex
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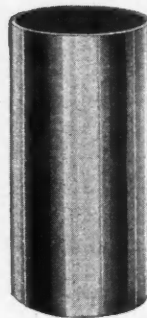
How much would you pay for one idea that would lower the operating cost of your trucks? This U. S. book is full of such ideas, each a practical, helpful suggestion on operating your shop on a more profitable basis. And it's free for the asking. You'll naturally want to use U. S. tools to put these labor saving ideas into effect. Ask for a catalog when you ask for the book.



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Worn blocks are made better than new when reconditioned with Accuralite Chrome-Nickel Cylinder Sleeves. They are different from any other sleeve that you ever used. They have seven times the wearing qualities of ordinary iron sleeves. Each sleeve is precisely machined and guaranteed both as to fit and mechanical perfection. Long wearing but moderately priced. For sizes write The Accuralite Company, Muskegon, Mich.

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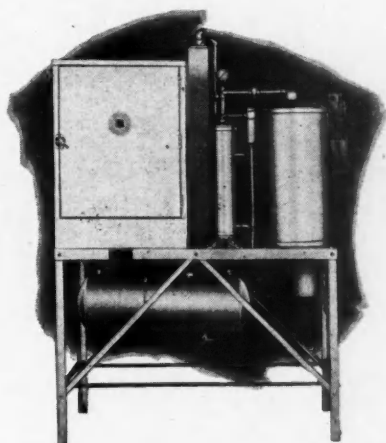
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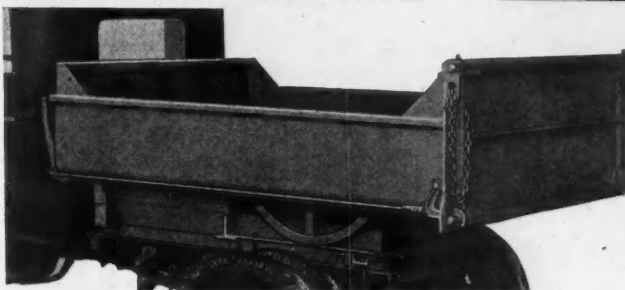
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FOR FLY WHEEL REPLACEMENT

The Commercial Car Journal

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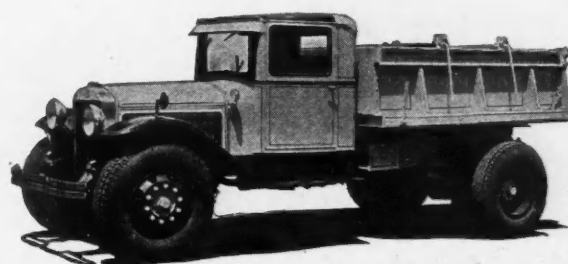
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Outstanding in quality, price, performance and appearance, the new De Luxe Series of **SCHACHT** trucks represents the supreme achievement of America's pioneer truck manufacturer.

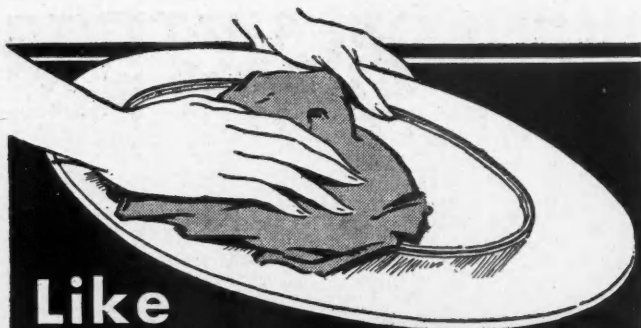
Ranging in capacity from 1½ to 7½ tons, **SCHACHT** trucks offer motor truck dealers full opportunity to meet every transportation requirement of the present day with many competitive advantages that insure good sales volume and substantial profits.

We will gladly furnish complete details upon request.

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January, 1931



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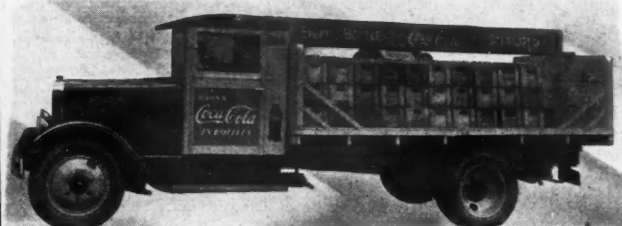
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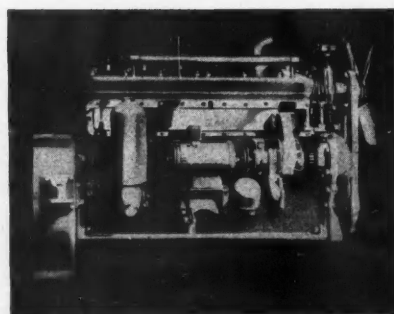
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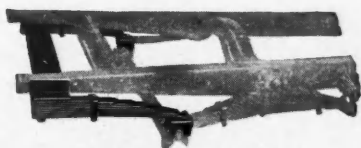


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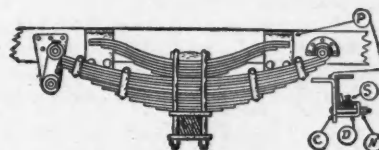
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The Zenith Universal Carburetor for commercial or heavy-duty service is marked by the great simplicity of its design and assembly. This simplicity combines many features necessary for efficient operation. ¶ It is *fully balanced*, which permits the use of an efficient air filter. An efficient filter accumulates dirt and restricts the free entry of air. With an ordinary carburetor this would result in an unbalanced, over-rich fuel mixture, causing dangerous crankcase dilution. But with the fully balanced Zenith Universal such a condition is impossible because the amount of fuel is automatically proportioned to the amount of air—thus the engine is given vital protection. ¶ To withstand the vibration of hard usage, the Universal is *ruggedly* constructed. Dust, dirt and grit, however, can defeat the most rugged instrument, so it also is *dustproof*. All working parts are completely enclosed and protected from dirt, vibration and tampering fingers. ¶ In addition to these features which assure a new standard of reliability, the Zenith Universal Carburetor is fitted with a spring-loaded strangler, eliminating manual control and over-choking. It functions perfectly at great angles fore and aft or sidewise. Unfailing reliability; quick, easy starting and continued running in cold weather; smooth, economical idling, and positive acceleration feature its performance in truck service. It is easy to clean and to service, is supplied with or without an adjustment, and is sold at an attractive price.

Several large fleets and many manufacturers
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Carburetor

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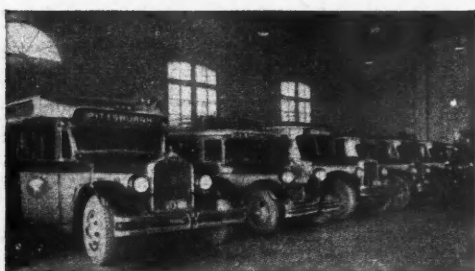
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AMERICAN BRAKEBLOKS Must Be Better..



Among the steady users of American Brakebloks is the Blue Ridge Transportation Co., Hagerstown, Maryland. Its service shop and part of its great fleet of buses is pictured above. This company won first prize for Class B in the 1930 efficiency contest conducted by "Bus Transportation." By means of better maintenance methods and the use of American Brakebloks, their service superintendent made a most remarkable record in cutting the cost per stop. And more! EVERY OTHER WINNER IN THIS CONTEST ALSO USED AMERICAN BRAKEBLOKS in setting their performance records.

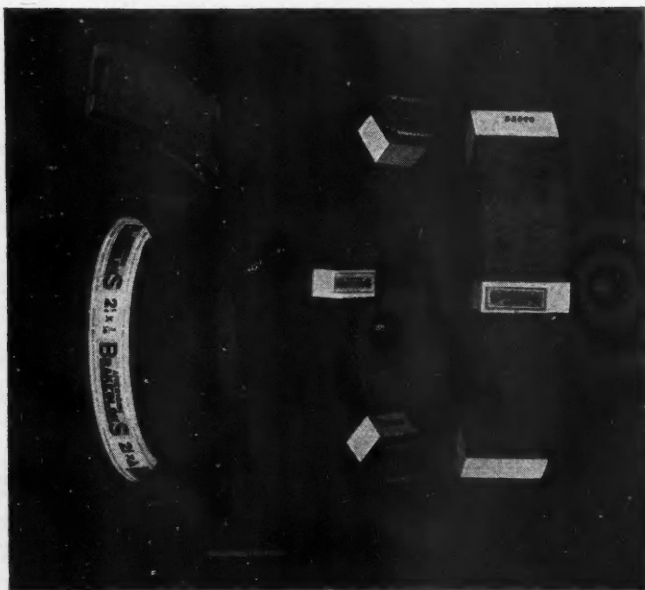
That's why so many Molded Linings are now Referred to by Similar Names

AMERICAN Brakebloks are the original Brakebloks. They are NOT just molded lining. They are made from an entirely different formula—a secret process. No other brake material is or ever can be like them. No other brake material can offer such remarkable qualities—features that provide unequalled safety, comfort, and economy.

Fleet owners and bus operators were quick to note the many superior qualities of American Brakebloks. So were 40 manufacturers of buses, trucks, brakes, and passenger cars. So were many of the salesmen representing brake lining manufacturers. That's why you now hear so many molded linings referred to as "Brake Blocks."

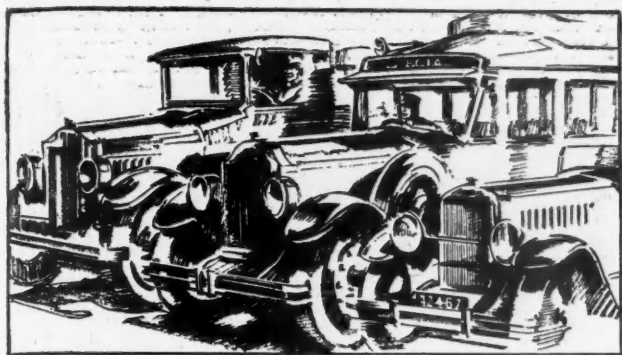
Don't be confused by this term. Make sure that you get the kind of quality you want: the original AMERICAN BRAKEBLOKS—spelled B-R-A-K-E-B-L-O-K-S. Then use them to cut your brake maintenance costs.

AMERICAN BRAKE MATERIALS CORPORATION
Division of AMERICAN BRAKE SHOE & FOUNDRY COMPANY
4660 Merritt Avenue, Detroit, Michigan, U. S. A. Sales Offices: Chicago, New York, San Francisco. Export Department: 30 Water St., New York.

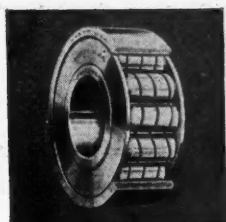


(Top) Keeper Type American Brakebloks for heavy duty buses and trucks. This popular type of brake material and method of installation were created by the makers of American Brakebloks. (Left) American Brakebloks in Rolls; for all passenger cars and light trucks having internal brakes. (Right) Full Coverage Type American Brakebloks in sets; for all makes of passenger cars and light commercial vehicles.





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These inherent Hyatt qualities serve and safeguard performance. They prolong, as they protect, operating life. They stubbornly oppose all evils that combine to make unsatisfactory, costly operation.

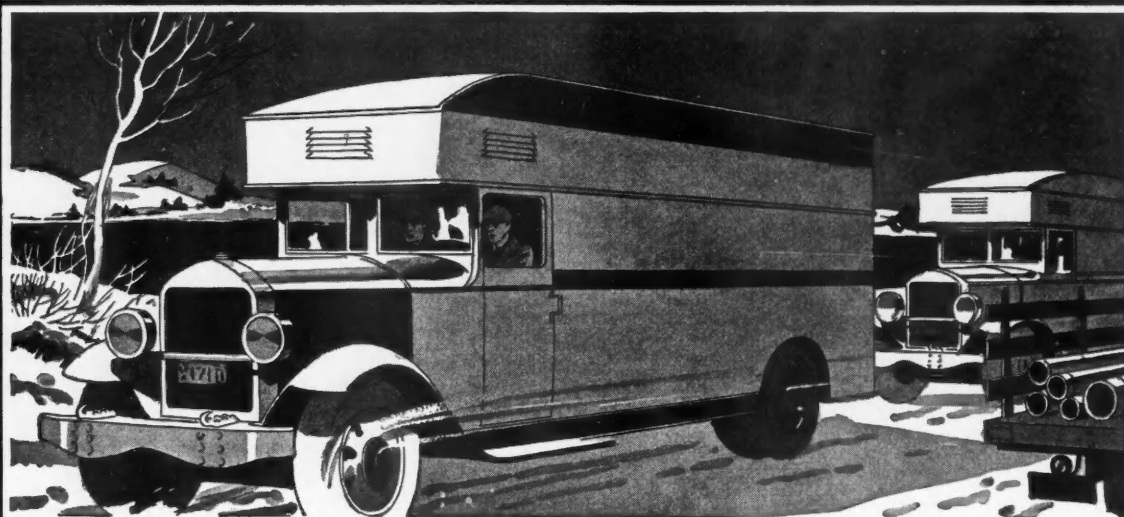
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HYATT ROLLER BEARING CO.

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QUIET ROLLER BEARINGS

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